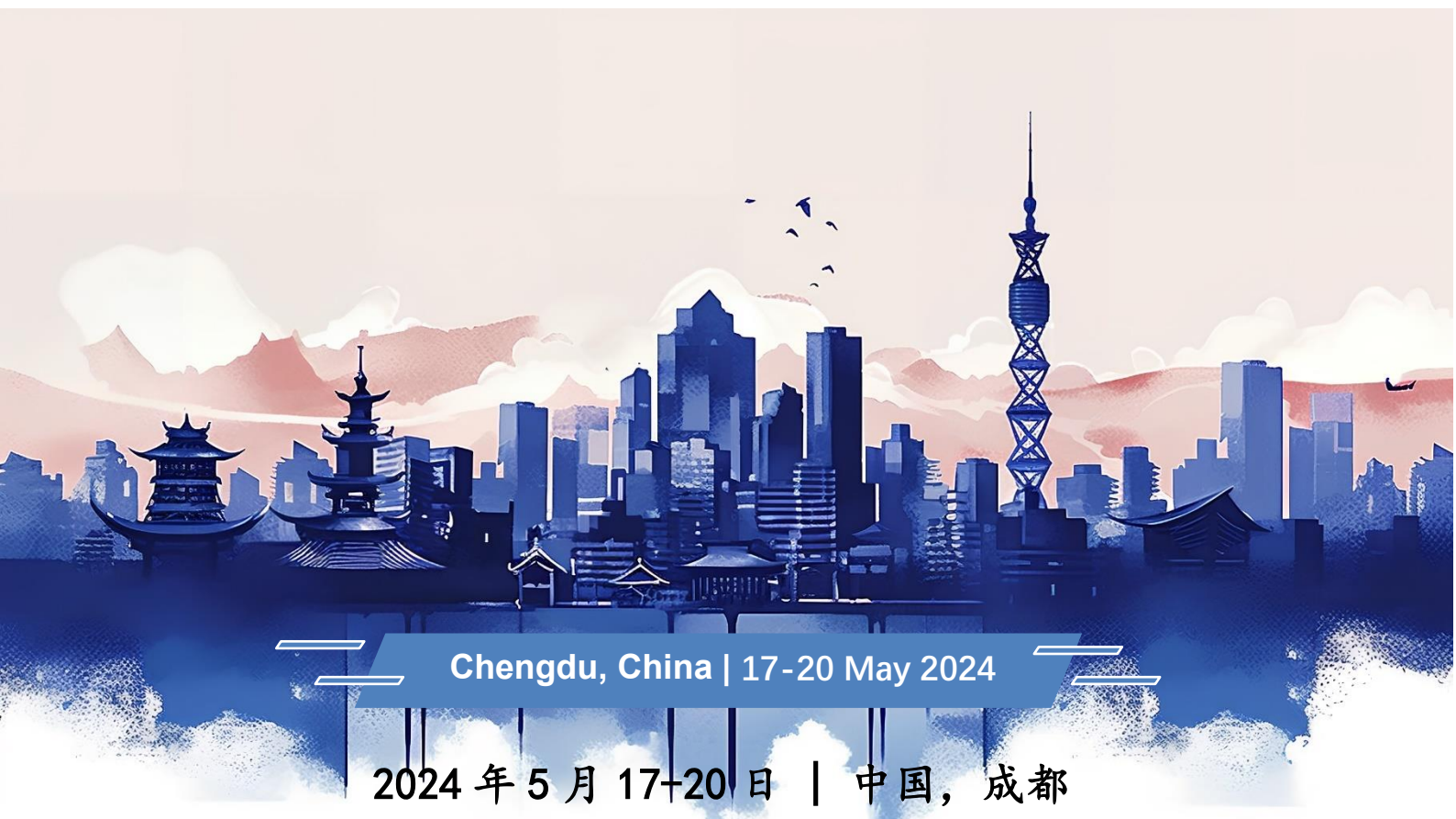


# 2024 7th International Conference on ELECTRONICS TECHNOLOGY

## 2024 年第七届电子技术国际会议



Chengdu, China | 17-20 May 2024

2024 年 5 月 17+20 日 | 中国，成都

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## Welcome Message | 欢迎辞

On behalf of the organizing committees, it is our pleasure to extend a warm welcome to all participants of 2024 7th International Conference on Electronics Technology (ICET), which taking place in Chengdu, China from May 17th to 20th. This conference is an ideal forum to showcase the latest research findings, listen to esteemed keynote and invited speakers, engage in oral and poster sessions, and reconnect with old acquaintances while making new ones.

ICET is co-sponsored by Sichuan Institute of Electronics and IEEE, hosted by Sichuan Institute of Electronics Youth Talent Work Committee, technically co-sponsored by Chengdu Section, Chengdu Section AP/EMC Chapter, Chengdu Section SP Chapter, IEEE Chengdu Section SSC/CAS Joint Chapter, Sichuan Institute of Electronics, also with the support of University of Electronic Science and Technology of China, Sichuan University, Southwest Jiaotong University, Xi'an University of Technology, Singapore Institute of Electronics, Chengdu University of Technology, Chengdu University of Information Technology, etc.

Spanning four days, the conference will feature keynote speeches, invited speeches, best paper competitions, parallel oral & poster sessions. ICET serves as a platform for researchers, practitioners, and industry experts to converge, exchange ideas, and explore the latest advancements in electronics technology.

We would like to express our sincere gratitude to all the speakers, presenters, and attendees for their contributions to this conference. Your expertise, insights, and enthusiasm are very important to the success of this event, and we truly believe that your participation will enrich our discussions and inspire new avenues of exploration. We also want to extend our appreciation to the organizing committee, sponsors, and volunteers for their hard work and dedication in bringing this conference to fruition.

As we embark on this journey of discovery and innovation together, we encourage you to actively participate, share your knowledge, and seize the opportunities for collaboration that this conference offers. May our collective efforts contribute to the advancement of electronics technology and pave the way for a brighter future.

Wishing you all a stimulating and rewarding conference experience.

Warm regards,

ICET Organizing Committees

## Conference Schedule | 会议日程

May 16 <sup>th</sup> , 2024 (Thursday)   5月16日 (星期四)		
10:00-12:00	Online Presentations Test	线上报告测试
May 17 <sup>th</sup> , 2024 (Friday)   5月17日 (星期五)		
10:00-17:00	Onsite Meeting Registration	线下会议签到
May 18 <sup>th</sup> , 2024 (Saturday)   5月18日 (星期六)		
9:00-12:00	Opening Remarks & Keynote Speeches	会议开幕式 & 主旨报告
13:30-14:50	Keynote & Invited Speeches	主旨报告 & 邀请报告
15:20-17:05	Best Student Paper Competitions	优秀学生论文竞赛
17:00-18:00	Poster Session-1	海报展示
18:00-20:00	Gala Dinner & Awards Ceremony	颁奖晚宴
May 19 <sup>th</sup> , 2024 (Sunday)   5月19日 (星期日)		
9:00-11:00	Invited Speeches	邀请报告
11:20-12:20	Poster Session-2	海报展示
13:30-18:00	Invited Speeches & Parallel Sessions	邀请报告&分论坛
16:00-17:00	Poster Session-3	海报展示
18:00-20:00	Conference Dinner	会议晚餐
May 20 <sup>th</sup> , 2024 (Monday)   5月20日 (星期一)		
9:30-12:00	Online Parallel Sessions	线上分论坛
13:30-18:00	Online Parallel Sessions	线上分论坛



## Detailed Technical Schedule | 详细日程

### Day 1 - May 16<sup>th</sup>, 2024 (Thursday) | 5月16日 (星期四)

#### Test for Online Presentations 线上分会报告前测试

Time	Event	Zoom ID
10:00-12:00	Online Session: Special Session 2, Session 2B, Session 4B, Session 7A, Session 7B	Zoom Room 1 812 1327 8732
10:00-12:00	Online Session: Session Chair, Session 2C, Session 1C, Session 3C, Session 6B	Zoom Room 2 883 0381 6096

### Day 2 - May 17<sup>th</sup>, 2024 (Friday) | 5月17日 (星期五)

#### Onsite Registration 线下会议签到

Time	Event	Venue
10:00-17:00	Sign Up & Materials Collection	酒店大堂   1F

### Day 3 - May 18<sup>th</sup>, 2024 (Saturday) | 5月18日 (星期六)

#### Opening & Keynote & Invited Speeches | 会议开幕 & 主旨报告 & 特邀报告

Time	Event	Venue
Host	Prof. Jiang Wu, University of Electronic Science and Technology of China	5F- Hall 5 5楼5号厅
9:10-9:15	<b>Welcome Address &amp; Opening Remarks</b> Yingqiao Pu, Vice Secretary-General of Sichuan Institute of Electronics	
9:15-9:55	<b>Keynote Speech I</b> Prof. Zhining Chen, National University of Singapore (IEEE Fellow)	
9:55-10:35	<b>Keynote Speech II</b> Prof. Cheng-Xiang Wang, Southeast University (IEEE/IET Fellow)	
10:35-11:20	<b>Group Photo &amp; Coffee Break 会议集体照&amp;茶歇</b>	
11:20-12:00	<b>Keynote Speech III</b> Prof. James Tin-Yau KWOK, Hong Kong University of Science and Technology (IEEE Fellow)	
12:00-13:30	<b>Lunch 会议午餐</b>	1F-Restaurant 1楼西餐厅
Host	Prof. Xiaosheng Zhang, University of Electronic Science and Technology of China	5F- Hall 5 5楼5号厅
13:30-14:10	<b>Keynote Speech IV</b> Prof. Koichi Asatani, Kogakuin University, Japan (IEEE & IEICE Life Fellow, Distinguished Lecturer of IEEE ComSoc)	
14:10-14:30	<b>Invited Speech I</b> Prof. Zhangcheng Hao, Southeast University	
14:30-14:50	<b>Invited Speech II</b> Prof. Changgang Li, Shandong University	

14:50-15:20	Coffee Break 茶歇				
<b>Day 3 - May 18<sup>th</sup>, 2024 (Saturday)   5月18日 (星期六)</b>					
<b>Best Student Paper Competitions &amp; Poster   优秀论文竞赛 &amp; 海报展示</b>					
Time	Event				
Venue	5F-Hall 6 5楼6号厅	5F-Hall 7 5楼7号厅	5F-Hall 8 5楼8号厅	5F-Hall 9 5楼9号厅	3F-Hall 2 3楼2号厅
15:20-17:05	Competition 1	Competition 2	Competition 3	Competition 4	Competition 5
17:00-18:00	Poster Session 1 - 海报展示 1				3F-Corridor 三楼走廊
18:00-20:00	Gala Dinner & Awards Ceremony 颁奖晚宴				5F- Hall 5 5楼5号厅

<b>Day 4 - May 19<sup>th</sup>, 2024 (Sunday)   5月19日 (星期日)</b>					
<b>Invited Speeches &amp; Parallel Sessions &amp; Poster   邀请报告 &amp; 平行分会 &amp; 海报展示</b>					
Time	Event				
Venue	5F-Hall 6 5楼6号厅	5F-Hall 8 5楼8号厅	5F-Hall 9 5楼9号厅	3F-Hall 2 3楼2号厅	
9:00-11:00	Session 1A	Session 2	Special Session 4	Session 3A	
11:00-11:20	Coffee Break 茶歇				
11:00-12:00	Poster Session 2 - 海报展示 2				3F-Corridor 三楼走廊
12:00-13:30	Lunch 会议午餐				1F-Restaurant 1楼西餐厅
13:30-15:30	Session 4A	Session 1B	Session 3B	Session 5	
15:30-16:00	Coffee Break 茶歇				
16:00-18:00	Session 6A	Special Session 6			
16:00-17:00	Poster Session 3 - 海报展示 3				3F-Corridor 三楼走廊
18:00-19:00	Dinner 会议晚餐				1F-Restaurant 1楼西餐厅

<b>Day 5 - May 20<sup>th</sup>, 2024 (Monday)   5月20日 (星期一)</b>					
<b>Online Oral Presentations &amp; Invited Speeches   线上分会报告 &amp; 邀请报告</b>					
Time	Event				
9:30-12:00	Zoom Room 1 812 1327 8732		Zoom Room 2 883 0381 6096		Zoom Room 3 854 4775 3573
	Special Session 2		Session 2B		Session 4B
12:00-13:30	<b>Break</b>				
13:30-15:30	Session 7A		Session 1C		Session 2C
15:30-16:00	<b>Break</b>				
16:00-18:00	Session 7B		Session 3C		Session 6B



## Session Information | 分会场信息

Offline Presentations 线下报告	
Competition 1	T0656, T0104, T0344, T0609, T0607, T0661
Competition 2	T0048, T0138, T0382, T0380, T0188, T0401
Competition 3	T0598, T0123, T0115, T0143, T0145, T0151, T0810
Competition 4	T0273, T0660, T0470, T0622, T0690, T0148, T0265
Competition 5	T0631, T0415, T0448, T0365, T0113, T0120
Session 1A	Invited Speech 1-T0163-Lu Zhang, Invited Speech 2- Yongbo Liao, Invited Speech 3-Shiying Han, Invited Speech 4-Weiwei Chen, Invited Speech 5-Kefei Liao
Session 2	Invited Speech 6-Liming Ding, Invited Speech 8-Nannan Li, Invited Speech 9-Xiangyu Chen, T0089-A
Special Session 4	Invited Speech 10-Enming Song, Invited Speech 11-Zhiwei Li, Invited Speech 12-Kai WANG, Invited Speech 13-Dan Wu, T0166, T0330-A
Session 3A	Invited Speech 14-Peng Chen, Invited Speech 15-T0131-Yonghong Tan, Invited Speech 16-T0277-Shiling Zhang, Invited Speech 17-Shuaibing Li, T0602, T0604
Session 4A	Invited Speech 19-Jifang Pei, Invited Speech 20-Zhiqiang Fan, T0571, T0155
Session 1B	Invited Speech 21-Qinghe DU, T0349, T0085, T0468, T0605, T0642
Session 3B	Invited Speech 22-Chuan He, T0550, T0463, T0670, T0386, T0683
Session 5	Invited Speech 23-Jinyu Zhan, Invited Speech 24-T0028-Chaoji CHEN, Invited Speech 25-Xianzhou Chen, Invited Speech 26-Li Xiang, T0293, T0321, T0206
Session 6A	Invited Speech 18-Ya Yang, T0341, T0393, T0035, T0542, T0699
Special Session 6	Invited Speech 28-T0842-Yong Luo, Invited Speech 29-Meng Shi, T0757, T0269, T0400, T0619, T0262
Poster Session 1	T0355, T0353, T0563, T0225, T0260, T0210, T0403, T0505, T0406, T0236, T0640, T0646, T0496, T0369, T0519, T0493, T0050, T0333, T0633, T0549, T0785, T0450, T0281, T0760, T0745, T0749, T0740, T0476, T0763, T0371
Poster Session 2	T0296, T0314, T0599, T0650, T0362, T0241, T0171, T0057, T0070, T0179, T0323, T0528, T0667, T0644, T0653, T0675, T0730, T0595, T0423, T0426, T0428, T0430, T0432, T0168, T0399, T0766, T0635, T0840
Poster Session 3	T0700, T0720, T0358, T0437, T0031, T0129, T0396, T0480, T0637, T0558, T0540, T0545, T0590, T0018, T0387, T0111, T0039, T0489, T0455, T0244, T0316, T0157, T0473, T0708, T0715, T0726, T0695, T0803
Online Presentations 线上报告	
Special Session 2	Invited Speech 30-Wen-Sheng Zhao, T0326, T0257, T0390, T0523, T0434, T0465
Session 2B	Invited Speech 31-Qinglei Guo, T0692, T0216, T0512, T0230, T0579
Session 4B	T0094, T0109, T0082, T0107, T0458, T0460, T0555, T0026
Session 7A	T0484, T0612, T0596, T0327-A, T0125
Session 1C	T0566, T0203, T0160, T0250, T0410, T0220, T0445, T0091
Session 2C	T0118, T0755, T0520, T0575, T0534, T0594, T0737
Session 7B	T0780, T0199, T0339, T0452, T0305, T0060



Session 3C	Invited Speech 32-Hui Hou, T0194, T0248, T0239, T0478, T0309, T0628, T0750
Session 6B	Invited Speech 27-Xuan Li, T0074, T0588, T0378, T0287, T0510, T0079, T0100, T0526

## Title of Sessions 分会场主题

Competition 1	Signal Processing	信号处理
Competition 2	Semiconductor Devices, Integrated Circuits and Applications	半导体器件、集成电路和应用
Competition 3	Electronics Materials and Devices	电子材料和设备
Competition 4	Communication and Networks	通信和网络
Competition 5	Power and Electrical Engineering	电力和电气工程
Session 1	Communication and Networks	通信和网络
Session 2	Electronics Materials and Devices	电子材料和设备
Session 3	Power and Electrical Engineering	电力和电气工程
Session 4	Signal Processing	信号处理
Session 5	Aerospace & Electronics Systems	航空航天与电子系统
Session 6	AI and Applications	人工智能和应用
Session 7	Electronics Applications	电子应用
Special Session 2	Semiconductor Devices, Integrated Circuits and Applications	半导体器件、集成电路和应用
Special Session 4	Emerging Computing: From Device, Circuit to System	新兴计算：从器件、电路到系统
Special Session 6	Resource Allocation Schemes for Mono-static/Multi-static Radar Systems	单基地/多基地雷达系统的资源分配方案
Poster Session 1	Electronics Materials and Devices	电子材料和设备
Poster Session 2	Electronic Systems and Electrical Engineering	电子系统与电气工程
Poster Session 3	Communication Systems and Signal Processing	通信系统与信号处理



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Zhiyu Xi  
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Zhou Hang  
Zulfiqar Ahmed



# History Overview | 会议历史概览

International Conference on Electronics Technology (ICET) was successfully held in Chengdu from 2018 to 2023. The conference garnered attention and support from numerous universities and enterprises, attracting over **300 experts and scholars** in the field of electronics technology each year. They discussed and exchanged the latest trends and future directions in electronics technology. The successful organization of the conference not only contributes to the advancement of electronics technology but also provides a platform for communication within the electronics community.



Group photos 2018-2023

ICET won "The Most Influential Academic Activity of the Year in Sichuan and Chongqing" for two years.



ICET 2018-2023 Conference Proceedings has been archived in **IEEE Xplore** and indexed by **Ei Compendex** and **Scopus**.



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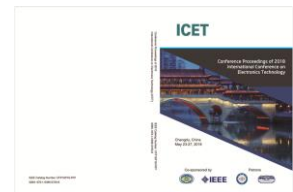
ICET 2021 (ISBN: 978-1-7281-7672-7)



ICET 2020 (ISBN: 978-1-7281-6282-9)



ICET 2019 (ISBN: 978-1-7281-1616-7)



ICET 2018 (ISBN: 978-1-5386-5750-8)



## Venue | 会议地点



### CROWNE PLAZA CHENGDU WUHOU

Address: No. 2 Chaoyin Road, Chengdu, China

成都武侯渝江皇冠假日酒店

四川成都武侯区潮音路2号

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#### ◆ From Shuangliu Airport |从双流机场出发

**By Metro (Around 40 mins):** Line 19→North Jiujiang Station (transfer to Line 17)→ Jitouqiao (Exit C)→600m Walk

**地铁 (大约 40 分钟):** 19 号线→九江北 (转 17 号线) →机投桥 (C 口出) →步行 600 米

**By Taxi (Around 30 mins):** Around RMB50 fare needed

**出租车 (大约 30 分钟):** 费用大约 50 元

#### ◆ From Shuangliu Airport |从天府机场出发

**By Metro (Around 100 mins):** Line 19→North Jiujiang Station (transfer to Line 17)→ Jitouqiao (Exit C)→600m Walk

**地铁 (大约 60 分钟):** 19 号线→九江北 (转 17 号线) →机投桥 (C 口出) →步行 600 米

**By Taxi (Around 60 mins):** Around RMB200 fare needed

**出租车 (大约 60 分钟):** 费用大约 200 元

#### ◆ From Chengdu North Railway Station |从火车北站出发

**By Metro:** Line 1→Luomashi Station (transfer to Line 4)→West Railway Station (transfer to Line 9)→Jitouqiao (Exit C)→600m Walk

**地铁:** 1 号线→骡马市站 (转 4 号线) →成都西站 (转 9 号线) →机投桥 (C 口出) →步行 600 米

**By Taxi (Around 30 mins):** Around RMB40 fare needed

**出租 (大约 30 分钟):** 费用大约 40 元

#### ◆ From Chengdu East Railway Station |从成都东站出发

**By Metro:** Line 2→Chengdu University of TCM & Sichuan Provincial People's Hospital Station (transfer to Line 4) →West Railway Station (transfer to Line 9)→Jitouqiao (Exit C)→600m Walk

**地铁:** 2 号线→中医大省医院 (转 4 号线) →成都西站 (转 9 号线) →机投桥 (C 口出) →步行 600 米

**By Taxi (Around 40 mins):** around RMB60 fare needed

**出租车 (大约 40 分钟):** 费用大约 60 元



# Onsite Events | 线下会议须知



## Oral Presentation | 口头报告

- ◆ Timing: a maximum of 15 minutes in total, including 2 minutes for Q&A. Please make sure your presentation is well timed.
- ◆ All oral session rooms are equipped with data projectors with a standard VGA connector. The speakers could also bring and use their own laptops or other presentation devices. Please check the compatibility of your laptop and the project before the session starts.
- ◆ Videos: If your Power Point files contain videos, please make sure that they are well formatted and connected to the main files.

## Poster Presentation | 海报展示

- ◆ Poster size is 60cm x 80cm
- ◆ Posters are required to be condensed and attractive.
- ◆ Please print it and bring to the conference venue

## Dress Code | 着装规范

Please wear formal clothes or national characteristics of clothing.

## Important Notes | 注意事项

- ◆ Please take care of your belongings during the conference. The conference organizer does not assume any responsibility for the loss of personal belongings of the participants.  
会议期间请务必随身携带贵重物品，会议不对任何物品丢失负责。
- ◆ Please wear your participation badge during the conference. There will be NO access for people without a badge. NEVER discard your badge at will.  
会议期间进入所有会场请佩戴代表证。请不要随意丢弃代表证。
- ◆ Accommodation is not provided. Delegates are suggested make early reservation.  
参会者请提前自行预订酒店房间。
- ◆ Please show the badge and meal coupons when dining.  
就餐时请同时出示代表证与餐券。



# Online Events | 线上会议须知



## Platform | 线上会议平台

ZOOM, Download link:

- ◆ <https://zoom.us/download>
- ◆ <https://zoom.com.cn/download> ( for Chinese authors)

## Meeting Rooms | 线上会议房间号

Room 1: Meeting Link: <https://us02web.zoom.us/j/81213278732>, Meeting ID: 812 1327 8732

Room 2: Meeting Link: <https://us02web.zoom.us/j/88303816096>, Meeting ID: 883 0381 6096

Room 3: Meeting Link: <https://us02web.zoom.us/j/85447753573>, Meeting ID: 854 4775 3573

## Online Meeting Needs | 线上会议需求

- ◆ A computer with internet connection and camera
- ◆ Headphone/earphone
- ◆ A quiet place
- ◆ Stable internet connection
- ◆ Proper lighting and background

## Test Your Presentation | 线上报告测试

Date: May 16, 2024

Prior to the formal meeting, online presenters shall join the test room to ensure everything is on the right track.

5月16日为线上作者报告测试日，为保证一切进行顺利，请准时参加。（线下报告者无需参加。）

## Presentation Time | 报告时长

A maximum of 15 minutes in total, including Q&A. Please make sure your presentation is well timed.



# Keynote Speeches | 主旨报告



## Keynote Speech I

9:15-9:55, May 18th, 2024 (Beijing Time / UTC+8)

5F- Hall 5 | 5楼5号厅

## Prof. Zhining Chen

National University of Singapore (IEEE Fellow)



### Speech Info.

**Speech Title: Prior-knowledge Guided Machine-learning Enabled Metalens Antenna Design**

**Abstract:** The design of antennas aims to meet the specific requirements of a system. This design relies on materials, fabrication processes, and design methodologies. Besides natural materials, we have introduced metamaterials—artificially engineered structures that exhibit unique electromagnetic properties not found in nature—to expand the boundaries of antenna design. Furthermore, we have explored new design methodologies to extend these boundaries. Traditionally, antenna design begins with basic designs, which are then modified or optimized to meet the specifications. However, this approach has limitations in achieving optimal performance due to constrained degrees of freedom (DoF). These limitations arise from physical constraints such as volume restrictions and feeding structures, as well as restricted design space regarding the selection of viable structures or parameters in the design process. Therefore, deep learning algorithms are being utilized to significantly increase the degrees of freedom (DoF) in antenna design. This will expand the antenna design space and hold promise for enhancing antenna performance. This speech will focus on outlining innovative approaches to antenna design. Specifically, it will explore the prior-knowledge-guided deep learning-enabled synthesis method and demonstrate its utility in enhancing the performance of metacells and metalens antennas.



### Biography

Professor Zhi Ning Chen got his two PhD degrees in China in 1993 and in Japan in 2003, respectively. Currently, Dr Chen is working as a Provost Chair Professor of Department of Electrical and Computer Engineering, National University of Singapore. He is serving as Director of Advanced Research and Technology Innovation Center (ARTIC) of College of Design and Engineering, National University of Singapore. He elevated Fellow of the Academy of Engineering, Singapore in 2019, Fellow of the Institute of Electrical and Electronic Engineers (Fellow of IEEE) in 2007, Fellow and Vice President of Asia and Pacific Artificial Intelligence Association in 2021, and Fellow of Chinese Institute of Communications 2023. He is the recipient of IEEE AP-S John Kraus Antenna Award (2021). He has published 710 papers, 7 books, and 34 patents. He has been the founding general chairs of IEEE International Workshop of Antenna Technology (iWAT in 2005), IEEE Asia-Pacific Conference on Antennas and Propagation (APCAP in 2012), Marina-Forum (Mar-For in 2021) and two important technical conferences.



### Keynote Speech II

9:55-10:35, May 18th, 2024 (Beijing Time / UTC+8)

5F- Hall 5 | 5 楼 5 号厅

## Prof. Cheng-Xiang Wang

Southeast University (IEEE/IET Fellow)



### Speech Info.

#### Speech Title: 6G Pervasive Channel Models Towards Standardization

**Abstract:** This keynote will give an in-depth study on 6G pervasive channel models towards standardization. It will start with 6G vision, application scenarios, performance metrics, and requirements of 6G standard channel models. Then, the pervasive channel modeling theory will be proposed, which employs a unified channel modeling framework, adopts a unified equation of channel impulse response, and integrates 6G channel characteristics for all frequency bands and scenarios. Furthermore, four 6G pervasive channel models based on the proposed theory will be presented using different channel modeling methods, i.e., geometry based stochastic model (GBSM), ray-tracing channel model, beam domain channel model (BDCM), and AI-based predictive channel model. Finally, future challenges on 6G channel measurements and modeling will be discussed.



### Biography

Cheng-Xiang Wang has been a professor with Southeast University, Nanjing, China, since 2018 and he is now the Executive Dean of the School of Information Science and Engineering. He was with Heriot-Watt University, Edinburgh, U.K., from 2005 to 2018, where he was promoted to a Professor in 2011. He has authored 4 books and more than 560 papers in refereed journals and conference proceedings, including 27 highly cited papers and 16 best paper awards. He has also delivered 27 invited keynote speeches and 18 tutorials in international conferences. His current research interests include wireless channel measurements and modeling, 6G wireless communication networks, and electromagnetic information theory. Prof. Wang is a Member of the Academia Europaea (The Academy of Europe), a Member of the European Academy of Sciences and Arts (EASA), a Fellow of the Royal Society of Edinburgh (FRSE), IEEE, and IET, an IEEE Communications Society Distinguished Lecturer in 2019 and 2020, and a Highly-Cited Researcher recognized by Clarivate Analytics. He is currently an Executive Editorial Committee Member of the IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS and served as an Editor for 16 international journals.





### Keynote Speech III

11:20-12:00, May 18th, 2024 (Beijing Time / UTC+8)

5F- Hall 5 | 5楼5号厅

## Prof. James Tin-Yau KWOK

Hong Kong University of Science and Technology (IEEE Fellow)



### Speech Info.

#### Speech Title: Diffusion Models for Time Series Forecasting

**Abstract:** Diffusion models have led to significant breakthroughs in the generation of images, audio and text. Recently, there have been attempts on extending the diffusion model for time series data. However, it is still an open question on how to adapt their strong modeling ability to model time series. In this talk, we introduce non-autoregressive diffusion models that achieve high-quality time series prediction. As different patterns are usually exhibited at multiple scales of a time series, we leverage the multi-resolution temporal structure and propose the multi-resolution diffusion model (mr-Diff). By using the seasonal-trend decomposition, fine-to-coarse trends are sequentially extracted from the time series for forward diffusion. The denoising process then proceeds in an easy-to-hard non-autoregressive manner. The coarsest trend is generated first. Finer details are progressively added, using the predicted coarser trends as condition variables. Experimental results on real-world time series datasets demonstrate that mr-Diff outperforms state-of-the-art time series diffusion models. It is also better than or comparable across a wide variety of advanced time series prediction models.



### Biography

Prof. Kwok is a Professor in the Department of Computer Science and Engineering, Hong Kong University of Science and Technology. Prof. Kwok served / is serving as an Associate Editor for the IEEE Transactions on Neural Networks and Learning Systems, Neurocomputing, Artificial Intelligence Journal, International Journal of Data Science and Analytics, and Editorial Board Member of Machine Learning. He is also serving as Senior Area Chairs of major machine learning / AI conferences including NeurIPS, ICML, ICLR, and IJCAI. He is recognized as the Most Influential Scholar Award Honorable Mention for "outstanding and vibrant contributions to the field of AAAI/IJCAI between 2009 and 2019". He is an IEEE Fellow, and will be the IJCAI-2025 Program Chair.



### Keynote Speech IV

13:30-14:10, May 18th, 2024 (Beijing Time / UTC+8)

5F- Hall 5 | 5楼5号厅

## Prof. Koichi Asatani

Kogakuin University, Japan

(IEEE & IEICE Life Fellow, Distinguished Lecturer of IEEE ComSoc)



### Speech Info.

#### Speech Title: Trends and Challenges for 6G Networks

**Abstract:** 5G is currently being installed in many countries. The new connected endpoints in communication networks will play key roles in the 5G era, including autonomous vehicles, various smart sensors, IoT devices, as well as the enhanced internet and other existing communication devices. 6G is currently being defined and is expected to be faster, with much less latency, and more intelligent than 5G. Various research initiatives have already started in academia, industry, and standard bodies towards 6G mobile wireless networks. This talk will review trends in global ICT, describe the 5G architecture and use cases, and provide an update on implementation status. It will then address the technical and regulatory challenges of 6G. Finally, it will discuss the issues and challenges in realizing and deploying 6G as an infrastructure.



### Biography

Koichi Asatani was with NTT from 1974 to 1997, where he was involved in R&D on optical fiber communication systems, FTTH, B-ISDN, ATM networks, IP networks, and their strategic planning. From 1997 to 2014, he served as a professor at Kogakuin University. Additionally, from 1999 to 2012, he was a visiting professor at the Graduate School of Global Information and Telecommunication, Waseda University. He was also the Chair Professor at Nankai University in Tianjin, China, from 2014 to 2018. From 2019 to 2022, he was a guest professor at Shanghai University in China and is currently a professor emeritus at Kogakuin University. He is a Life Fellow of both IEEE and IEICE. He was appointed as a Distinguished Lecturer of IEEE ComSoc for 2006-2008 and 2011-2014. He has served as an Ex-Chair and Advisory Board Member of IEEE ComSoc TC on Communication Quality and Reliability (CQR-TC) and has been a Feature Editor on Standards (1993-1999) and a Senior Technical Editor (1999-2005) of IEEE Communications Magazine. From 1988 through 2000, he served as the Vice-Chair of ITU-T SG 13 and Chair of a Working Party of SG13 on Future Networks. He also served as Chair for the National Committee on Next Generation Networks in Japan, as well as Chair of the R&D and Standardizations Working Group for the Next Generation IP Network Promotion Forum. He served as IEEE ComSoc Director of Membership Programs Development for 2014-2015 and as the Chair of the IEEE ComSoc GIMS Committee for 2018-2019. He is a member of the IEEE ComSoc Fellow Evaluation Committee for 2019-2021 and served as a Member at Large of the Board of Governors for IEEE ComSoc for 2020-2022. He is also serving as a board member at IEICE and Director on Standards Activities since 2014.



## Invited Speeches | 特邀报告



Changgang Li  
Shandong University,  
China



Wensheng Zhao  
Hangzhou Dianzi  
University, China



Kai Wang  
Southern University of  
Science and Technology,  
China



Hui Hou  
Wuhan University of  
Technology, China



Peng Chen  
Southeast University,  
China



Lu Zhang  
Zhejiang University,  
China



Nannan Li  
China Academy of  
Engineering Physics



Yonghong Tan  
Shanghai Normal  
University, China



Zhiwei Li  
National University of  
Defense Technology,  
China



Shiying Han  
Nankai University,  
China



Zhang-Cheng Hao  
Southeast University



Chuan He  
Sichuan University,  
China



Dan Wu  
Shenzhen Technology  
University, China



Qinglei Guo  
Shandong University,  
China



Enming Song  
Fudan University,  
China



Yongbo Liao  
University of Electronic  
Science and  
Technology of China



Jifang Pei  
University of Electronic  
Science and Technology  
of China



Chaoji Chen  
Beijing Institute of  
Spacecraft System  
Engineering, China



Xiang Li  
Guilin University Of  
Electronic Technology,  
China



Jinyu Zhan  
University of Electronic  
Science and  
Technology of China



Shiling Zhang  
State Grid Chongqing  
Electric Power  
Company, China



Xianzhou Chen  
China Academy of  
Space Technology-  
Xi'an, China



Ya Yang  
Beijing Institute of  
Nanoenergy and  
Nanosystems



Weiwei Chen  
Ningbo University,  
China



Qinghe Du  
Xi'an Jiaotong  
University



Kefei Liao  
Guilin University of  
Electronic Technology



Shuaibing Li  
Lanzhou Jiaotong  
University



Meng Shi  
Chinese Academy of  
Sciences



Xiangyu Chen  
Chinese Academic of  
Sciences



Xuan Li  
East China Jiaotong  
University, China



Yong Luo  
Shanghai University,  
China



Liming Ding  
The National Center for  
Nanoscience and  
Technology



Zhiqiang Fan  
University of Electronic  
Science and Technology  
of China



# Competition 1-Signal Processing

## 信号处理

Chair: Shiling Zhang, State Grid Chongqing Electric Power Company, China

May 18th, 2024   15:20-16:50		5F-Hall 6   5楼6号厅
<b>T0656</b> 15:20-15:35	2-D DOA Estimation with Circular Arrays Based on the Fourth-Order Difference Co-Array <b>Mr. Yuhang Li</b> , Hantian Wu, Jiangang Hou and Qing Shen Beijing Institute of Technology, China	
<b>T0104</b> 15:35-15:50	Information-Geometric Based GP-IMMCKF Fusion for Multi-Radar Target Tracking <b>Mr. Zhaoyang Li</b> , Peng Chen and Zongxin Wang Southeast University, China	
<b>T0344</b> 15:50-16:05	Tram Track Detection Algorithm Based on Geometric Moments Weibo Wang, <b>Ms. Juan Yang</b> , Yu Fang, Yongkang Zheng, Mingjia Wang and Hongping Hu Xihua University, China	
<b>T0609</b> 16:05-16:20	3D Indoor Environment Perception Based on Millimeter Wave Multipath Information <b>Mr. Zhiwei Yao</b> , Zhiqiang Tan, Ming Zhao and Limin Xiao Tsinghua University, China	
<b>T0607</b> 16:20-16:35	Interpolation-Based Time Delay Estimation for Moving Targets <b>Mr. Yiwei Liu</b> , Yunpeng Zhao, Yuzheng Bao, Jiangang Hou and Qing Shen Beijing Institute of Technology, China	
<b>T0661</b> 16:35-16:50	Intelligent Detection of Cavity HRRP Target Regions based on Few Sample <b>Mr. Jiahua Yang</b> , Hongmei Ren, Chunping Yang and Tao Zhao University of Electronic Science and Technology, China	



# Competition 2-Semiconductor Devices, Integrated Circuits and Applications

## 半导体器件、集成电路和应用

Chair: Zhuanlin Liu, Southwest Petroleum University, China

May 18th, 2024 | 15:20-16:50

5F-Hall 7 | 5楼7号厅

<b>T0048</b> 15:20-15:35	An Enhanced Power-Delay and Area Efficient Dual Output Subthreshold Level Shifter <b>Mr. Qianxi Cheng</b> , Xin'An Wang, Xing Zhang and Chen Zhang Peking University Shenzhen Graduate School, China
<b>T0138</b> 15:35-15:50	A 12bit 200MHz Pipeline SAR ADC with All-Digital Background Calibration Technique Using Decision-Level Gap Estimation <b>Dr. Lizhen Zhang</b> , Jianhui Wu Southeast University, China
<b>T0382</b> 15:50-16:05	High PSRR LDO for Multiple Series Battery Management Systems <b>Mr. Yuyang Gao</b> , Zhongjie Guo, Ruokai Bai and Yina Bai Xi'an University of Technology, China
<b>T0188</b> 16:05-16:20	Enhancement of the Optoelectronic Characteristics of Deepultraviolet LED by the n+ -AlGaN Tunnel Junction <b>Dr. Zhongqiu Xing</b> , Yongjie Zhou, Fang Wang, Juin J. Liou, Yuhuai Liu Zhengzhou University, China
<b>T0380</b> 16:20-16:35	High Speed Single-Slope ADC Design Method Applied to CMOS Image Sensors <b>Mr. Jinquan Zhou</b> , Zhongjie Guo, Jinao Zhang and Li Lin Xi'an University of Technology, China
<b>T0401</b> 16:35-16:50	Stage Delay Calculation Method Considering Effective Capacitance <b>Ms. Peiwen Zha</b> , Jingjing Guo and Shugang Zhang Nanjing University of Posts and Telecommunications, China



# Competition 3-Electronics Materials and Devices

## 电子材料和设备

Chair: Yongbo Liao, University of Electronic Science and Technology of China

May 18th, 2024   15:20-17:05		5F-Hall 8   5楼8号厅
<b>T0598</b> <b>15:20-15:35</b>	High Reflective Area Piezoelectric Thin Film Biaxial MEMS Micro-Mirror Coupled with Lever Amplifier Structure <b>Mr. Yiming Li</b> and Yanyuan Ba Henan Normal University, China	
<b>T0123</b> <b>15:35-15:50</b>	A Novel Infrared Spectroscopy Technology for Detecting Types and Maturity of Cancer Cells <b>Mr. Mohan Wang</b> , Xu Xue, Yang Jiang, Mengqiang Huang, Xiaomeng Fang, Wenjian Kuang and Xiang Liu Nanjing University of Information Science & Technology, China	
<b>T0143</b> <b>15:50-16:05</b>	An Analytical Model of Terahertz Responsivity for Double-Gate MOSFET Detector with Consideration of Short Channel <b>Ms. Junyi Cao</b> , Qian Xie, Jiaming Wang and Zheng Wang UESTC, China	
<b>T0115</b> <b>16:05-16:20</b>	Drug Composition and Concentration Detection System Based on Spectral Sensing Photodetectors <b>Mr. Long Teng</b> , Chun Lei, Ye Tao, Zhi Tao, Xiang Liu and Wenjian Kuang Nanjing University of Information Science & Technology, China	
<b>T0145</b> <b>16:20-16:35</b>	Design of Metal Membrane Stress Driven Microtube Microwave L-C Resonators <b>Mr. Zhengji Xia</b> , Zhijun Zhang, Ao Gong, Wei He and Wen Huang Hefei University of Technology, China	
<b>T0810</b> <b>16:35-16:50</b>	Coupled Electric-optical Model for High Efficiency Waveguide-coupled Colloidal Quantum Dot Light-emitting Diodes <b>Jieyu Tan</b> , Hechun Zhang, Ruitao Zheng, Xiangtian Xiao, Kai Wang Shenzhen Technology University, China	
<b>T0151</b> <b>16:50-17:05</b>	Tunable Kinetic Inductance Enabled On-chip Reconfigurable Microwave Resonators <b>Mr. Zhijun Zhang</b> , Zhengji Xia, Yilong Guo, Wei He and Wen Huang Hefei University of Technology, China	

# Competition 4-Communication and Networks

## 通信和网络

Chair: **Yang Su**, Nanjing University of Information Science and Technology, China

May 18th, 2024 | 15:20-17:05

5F-Hall 9 | 5楼9号厅

<b>T0273</b> <b>15:20-15:35</b>	OFDM-LFM-Based RF Stealth Waveform Design for Airborne Network Radar under Spectral Coexistence <b>Dr. Jian Wang</b> , Kang Chen, Chenguang Shi and Jianjiang Zhou Nanjing University of Aeronautics and Astronautics, China
<b>T0660</b> <b>15:35-15:50</b>	Quad-Port Defective Ground Structure (DGS) MIMO Antenna System for Fifth Generation Mobile Phone Application <b>Mr. Hassan Sani Abubakar</b> , Zhiqin Zhao, Shiwen Lei, Boning Wang and Saad Hassan Kiani University of Electronics Science and Technology of China
<b>T0470</b> <b>15:50-16:05</b>	Burst Service Congestion Prediction in Cognitive Radio Networks: An Exploration Based on BP Neural Networks <b>Ms. Jie Yan</b> , Xin Chen and Ziru Wu Liaoning Technical University, China
<b>T0622</b> <b>16:05-16:20</b>	Privacy-preserving and Anonymous Certificateless Mutual Authentication Protocol for WBAN <b>Dr. Yong Wu</b> and Jiangjiang Zhang Beijing University of Technology, China
<b>T0690</b> <b>16:20-16:35</b>	Fixed-Time Distributed Optimization for Networked Multi-Agent Systems with Unknown Disturbances Over Signed Graph <b>Mr. Xian Qing</b> , Kaiyu Qin, Zhiqiang Li, Mengji Shi, Boxian Lin and Yuehong Dai University of Electronic Science and Technology of China
<b>T0148</b> <b>16:35-16:50</b>	A Method to Recognize Dynamic Gestures on Edge Embedded Devices <b>Mr. Rui Zhong</b> , Chenrui Li, Zhuoyu Zhang, Ran Yan, Shiyu Wang and Jiangtao Huangfu Zhejiang University, China
<b>T0265</b> <b>16:50-17:05</b>	Joint Transmit and Receive Beampattern Design for Multi-Target Tracking in C-MIMO Radar System <b>Dr. Lintao Ding</b> , Chenguang Shi, Kang Chen and Jianjiang Zhou Nanjing University of Aeronautics and Astronautics, China



# Competition 5-Power and Electrical Engineering

## 电力和电气工程

Chair: Jianguo Wang, Qinghai University, China

May 18th, 2024   15:20-16:50		3F-Hall 2   3楼2号厅
<b>T0631</b> 15:20-15:35	IGCT Selection Method in Hybrid DC Circuit Breakers Based on TCAD Simulation <b>Ms. Ziyue Yang</b> , Jiahao Guo, Mingming Shi, Ruike Zhang, Yifei Wu, Yi Wu and Jianzhen Zhang Xi'an Jiaotong University, China	
<b>T0120</b> 15:35-15:50	Ammonia Detection System Based On Spectral Absorption <b>Mr. Xu Xue</b> , Yang Jiang, Mohan Wang, Xiaomeng Fang, Mengqiang Huang and Xiang Liu Nanjing University of Information Science & Technology, China	
<b>T0448</b> 15:50-16:05	Multiple-Sensors Enhanced Electromagnetic Time Reversal Algorithm for Partial Discharge Localization of Gas Insulated Switchgear <b>Mr. Zongyao Wang</b> , Lei Jin, Yuan Yan, Zixing Xu, Xin Xia and Hongjie Li Xi'an Jiaotong University, China	
<b>T0365</b> 16:05-16:20	Composite Circuit for Energy Harvesting from Triboelectric and Electromagnetic Generators <b>Mr. Yurui Shang</b> , Mingyang Liu, Zhenming Li, Yongling Lu, Wei Liu and Wei Tang Beijing Institute of Nanoenergy and Nanosystems Chinese Academy of Sciences, China	
<b>T0113</b> 16:20-16:35	Imaging System and Design Based on Quantum Dot Infrared Focal Plane Detector <b>Mr. Jiang Yang</b> , Mohan Wang, Xu Xue, Xiaomeng Fang, Xiang Liu and Zhi Tao NUIST, China	
<b>T0415</b> 16:35-16:50	Medium- and Long- Term Power Generation Forecast Based on Climate Characterisation and Improved XGBoost Algorithm Li Yunhao, <b>Mr. Yongfei Li</b> , Zhang Chenggang, Chen Yihua, Du Liyuan and Lu Hao Xi'an Jiaotong University, China	

# Session 1A-Communication and Networks

## 通信和网络

Chair: Shiyang Han, Nankai University, China

May 19th, 2024 | 9:00-10:40

5F-Hall 6 | 5楼6号厅

### Invited Speech

1-T0163

9:00-9:20

Intelligent Signal Recognition and Adaptive Coded Modulation of Radio-over-Fiber Systems

**Dr. Lu Zhang**

Zhejiang University, China

### Invited Speech

2

9:20-9:40

High Density Vertically Integrated Nanowall Devices (Nwafet) and Integration Technology

**Dr. Yongbo Liao**

University of Electronic Science and Technology of China

### Invited Speech

3

9:40-10:00

Research on the Optimization of Channel Access and Transmission for Symbiotic Radio Wireless Networks

**Dr. Shiyang Han**

Nankai University, China

### Invited Speech

4

10:00-10:20

Silicon-Based Flexible-Grid Mode-and Wavelength-Selective Switch

**Dr. Weiwei Chen**

Ningbo University, China

### Invited Speech

5

10:20-10:40

Dual-Synthesis 3D Imaging Radar Technology

**Dr. Kefei Liao**

Guilin University of Electronic Technology, China



## Session 2-Electronics Materials and Devices

### 电子材料和设备

Chair: Xiaosheng Zhang, University of Electronic Science and Technology of China

May 19th, 2024 | 9:00-10:15

5F-Hall 8 | 5楼8号厅

**Invited Speech** Key Materials for Organic Photovoltaics

**6**

**Dr. Liming Ding**

**9:00-9:20**

National Center for Nanoscience, China

**Invited Speech** On-chip Integrated Nanoscale Air-Channel Electronic Devices

**8**

**Dr. Nannan Li**

**9:20-9:40**

China Academy of Engineering Physics, China

**Invited Speech** Triboelectric Polymer and Wearable Active Sensor

**9**

**Dr. Xiangyu Chen**

**9:40-10:00**

Beijing Institute of Nanoenergy and Nanosystems, Chinese Academy of Sciences, China

**T0089-A**

**10:00-10:15**

The Impact of Crosslinking Agents on the Dielectric Properties of Thermosetting Polyphenylene Oxide Resin: Experiment Meets Simulation

**Ms. Xiaowei Wu**, Zeming Fang, Xiaotao Zhu, Cheng Luo, Qianfa Liu and Ke Wang  
Southern University of Science and Technology, China

# Special Session 4-Emerging Computing: From Device, Circuit to System

## 新兴计算：从器件、电路到系统

Chair: Zhiwei Li, National University of Defense Technology, China

May 19th, 2024 | 9:00-10:50

5F-Hall 9 | 5楼9号厅

<b>Invited Speech</b> <b>10</b> <b>9:00-9:20</b>	Soft Active Electronics for Chronic Neural Interfaces <b>Dr. Enming Song</b> Fudan University, China
<b>Invited Speech</b> <b>11</b> <b>9:20-9:40</b>	Algorithm/Hardware Co-design toward Efficient and Reliable in-memory Computing <b>Dr. Zhiwei Li</b> National University of Defense Technology, China
<b>Invited Speech</b> <b>12</b> <b>9:40-10:00</b>	Light Field Manipulation of Quantum Dot Luminescent Devices <b>Dr. Kai Wang</b> Southern University of Science and Technology, China
<b>Invited Speech</b> <b>13</b> <b>10:00-10:20</b>	Optical Field Manipulation Energized Optoelectronic Devices <b>Dr. Dan Wu</b> Shenzhen Technology University, China
<b>T0166</b> <b>10:20-10:35</b>	Optimal Designs of 1T1R Structure to Reduce the Transistor IR Drop <b>Mrs. Lei Shi, Mr. Zhenrong Jia</b> , Haodong Hu, Zhiwei Li, Haijun Liu, Yujiao Nie, Yinzhen Xi and Changlin Chen National University of Defense Technology, China
<b>T0330-A</b> <b>10:35-10:50</b>	AIMCU-MESO: An In-Memory Computing Unit Constructed by MESO Device <b>Dr. Junwei Zeng</b> , Nuo Xu and Liang Fang National University of Defense Technology, China



# Session 3A-Power and Electrical Engineering

## 电力和电气工程

Chair: Yonghong Tan, Shanghai Normal University, China

May 19th, 2024   9:00-10:50		3F-Hall 2   3楼2号厅
<b>Invited Speech</b> <b>14</b> <b>9:00-9:20</b>	An Efficient Covariance Matrix Reconstruction Method for Robust Adaptive Beamforming <b>Dr. Peng Chen</b> Southeast University, China	
<b>Invited Speech</b> <b>15-T0131</b> <b>9:20-9:40</b>	A Novel Predictive Gradient Filtering Approach and Application to Micro-opto-electro-mechanical Systems <b>Dr. Yonghong Tan</b> Shanghai Normal University, China	
<b>Invited Speech</b> <b>16-T0277</b> <b>9:40-10:00</b>	Structure Specification and Modeling Research on Digital Twin of SF6 Insulation Valve-Side Bushing <b>Dr. Shiling Zhang</b> State Grid Chongqing Electric Power Company, China	
<b>Invited Speech</b> <b>17</b> <b>10:00-10:20</b>	Location and Capacity Determination of Expressway Charging Stations Considering PV Uncertainty <b>Dr. Shuaibing Li</b> Lanzhou Jiaotong University, China	
<b>T0602</b> <b>10:20-10:35</b>	CEEMDAN-SE Based Multi-Predictor Hybrid Model for Cloud Resource Prediction <b>Mr. Xulin Li</b> , Zhang Yi, Zebin Wu and Zhihui Wei Nanjing University of Science and Technology, China	
<b>T0604</b> <b>10:35-10:50</b>	Cloudformer: Contrastive Learning Based Cloud Workload Prediction <b>Mr. Hui Lu</b> , Yi Zhang, Zebin Wu and Zhihui Wei Nanjing University of Science and Technology, China	



## Session 4A-Signal Processing

### 信号处理

Chair: Zhichao Sun, University of Electronic Science and Technology of China, China

May 19th, 2024 | 13:30-14:40

5F-Hall 6 | 5楼6号厅

#### Invited Speech

19

13:30-13:50

Synthetic Aperture Radar Target Detection and Recognition under Complex Conditions

**Dr. Jifang Pei**

University of Electronic Science and Technology of China

#### Invited Speech

20

13:50-14:10

Microwave Photonics Beamforming

**Dr. Zhiqiang Fan**

University of Electronic Science and Technology of China

**T0571**

14:10-14:25

An adaptive First Arrival Time Picking Method for Microseismic Data Based on Stepwise Fuzzy Clustering

**Mr. Lexiao Peng**, Zhiqiang Lan, Jie Wang, Kun Zhu, Juanjuan Li and Tao Chen  
Soochow University, China

**T0155**

14:25-14:40

A Hybrid MIR-spectrum Processing Algorithm for Microplastics Analysis

Zhengke Chen, Bowen He, **Ms. Ting Xia**, Qikun Yang, Dongyu Cui, Wei Huang,  
Zhuoqing Yang and Faheng Zang  
Shanghai JiaoTong University, China



# Session 1B-Communication and Networks

## 通信和网络

Chair: Qinghe Du, Xi'an Jiaotong University, China

May 19th, 2024 | 13:30-15:05

5F-Hall 8 | 5楼8号厅

<b>Invited Speech 21</b>	Age-aware Multiple Access Towards Multiple Status Updates
<b>13:30-13:50</b>	<b>Dr. Qinghe DU</b> Xi'an Jiaotong University, China
<b>T0349</b>	Sensor and Resource Scheduling for Search and Track Tasks in Distributed Radar Sensor Network
<b>13:50-14:05</b>	<b>Assistant Prof. Yang Su</b> and Shengnan Shi Nanjing University of Information Science and Technology, China
<b>T0085</b>	Multi-UAV Collaborative Secure Communication Using Multi-Agent Deep Reinforcement Learning
<b>14:05-14:20</b>	Liu Shulin, <b>Dr. Gongchao Su</b> and Chen Bin Shenzhen University, China
<b>T0468</b>	Design and Implementation of a Full Duplex Voice Communication System for Beidou Satellite
<b>14:20-14:35</b>	<b>Mr. Zhuo Han</b> , Yanbin Chen, Yongqiang Guo, Zhenhua Gao and Huai Wang Space Star Technology CO., LTD, China
<b>T0605</b>	UAV-Aided 3D Building Map Reconstruction from RSS Measurements: a Diffraction-Based Approach
<b>14:35-14:50</b>	<b>Mr. Zhiqiang Tan</b> , Yuanhao Jiang, Limin Xiao, Ming Zhao and Yunzhou Li Tsinghua University, China
<b>T0642</b>	Research on Adaptive Communication Method of Inter-satellite Link in Satellite Group System
<b>14:50-15:05</b>	<b>Mr. Lei Shi</b> , Qinghua Luo, Jiao Dou and Qi Li DFH Satellite Co.,Ltd., China

## Session 3B-Power and Electrical Engineering

### 电力和电气工程

Chair: Haiqing Li, University of Electronic Science and Technology of China, China

May 19th, 2024 | 13:30-15:05

5F-Hall 9 | 5楼9号厅

<b>Invited Speech</b> 22 13:30-13:50	Research on Coordinated Optimization Method of Gas-Electric Combined System Under Extreme Disasters <b>Dr. Chuan He</b> Sichuan University, China
<b>T0463</b> 13:50-14:05	Simulation Analysis of Grounding System of Tanahu HPP in Nepal <b>Prof. Peng Yu</b> , Yu Dan, Ding Kuang and Liu Tao Chengdu Engineering Corporation Limited, China
<b>T0550</b> 14:05-14:20	Resilience Assessment of Urban Power Grid Under Extreme Disasters <b>Ms. Wenxin Guo</b> and Chuan He Sichuan University, China
<b>T0670</b> 14:20-14:35	Simulation Design of Lighting System for Nepal Tanahu HPP <b>Prof. Peng Yu</b> , Liu Tao, Zhao Huimei and Yu Dan Chengdu Engineering Corporation Limited, China
<b>T0386</b> 14:35-14:50	A Simulation and Test Method for Fault Current Suppression Branch in DC Grid <b>Assistant Prof. Fangyuan Li</b> , Huaiguang Gu, Jiawei Zhou and Yang Gao State Grid Smart Grid Research Institute Co., LTD., China
<b>T0683</b> 14:50-15:05	Research on Pre-Disaster Reinforcement of Distribution Network System in Extreme Weather <b>Mr. Lixue Zheng</b> , Chuan He, Yixiang Lin and Yitong Ning Sichuan University, China



## Session 5-Aerospace & Electronics Systems

### 航空航天与电子系统

Chair: Xiang Li, Guilin University of Electronic Technology, China

May 19th, 2024   13:30-15:35		3F-Hall 2   3楼2号厅
<b>Invited Speech</b> 23 13:30-13:50	Defense Technologies for Internal Errors and External Attacks of Intelligent Embedded Systems <b>Dr. Jinyu Zhan</b> University of Electronic Science and Technology of China	
<b>Invited Speech</b> 24-T0028 13:50-14:10	Discussion on the Design of Low-cost Spacecraft Avionics based on COTS Technology <b>Dr. Chaoji Chen</b> Beijing Institute of Spacecraft System Engineering, China	
<b>Invited Speech</b> 25 14:10-14:30	Large-scale, Ultra-Wideband High-Isolation Aperture-Level Simultaneous Transmit and Receive Technology <b>Dr. Xianzhou Chen</b> China Academy of Space Technology-Xi'an, China	
<b>Invited Speech</b> 26 14:30-14:50	Challenges and Solutions for Unmanned Aerial Vehicle Navigation Using Optical Flow Sensor Aerospace & Electronics Systems <b>Dr. Li Xiang</b> Guilin University of Electronic Technology, China	
<b>T0293</b> 14:50-15:05	An Adaptive Image Windowing Method for Real-Time Object Detection on Board <b>Dr. Long Ling</b> , Zhijun Lu, Manli Shi, Jie Wang, Yuqing Li and Minghe Hu Beijing Institute of Space Mechanics Electricity, China	
<b>T0321</b> 15:05-15:20	Analysis of the Influencing Factors and Coupling Mechanism of Resistivity of Rock and Mineral of the Chazangcuo Cu-Pb-Zn Deposit <b>Associate Prof. Jianguo Wang</b> Qinghai University, China	
<b>T0206</b> 15:20-15:35	A Survey of Out-of-band Management Vulnerability Analysis based on BMC <b>Ms. Yujia Zhai</b> , Fei Cao, Ping Zhang, Guimin Zhang, Weiping Yao and Yue Hao Information Engineering University, China	

## Session 6A-AI and Applications

## 人工智能和应用

Chair: Yang Luo, University of Electronic Science and Technology of China, China

May 19th, 2024 | 16:00-17:35

5F-Hall 6 | 5楼6号厅

<b>Invited Speech</b> <b>18</b> <b>16:00-16:20</b>	Hybridized and Coupled Nanogenerators <b>Dr. Ya Yang</b> Beijing Institute of Nanoenergy and Nanosystems, China
<b>T0341</b> <b>16:20-16:35</b>	Convolutional Bi-GRU-based Prediction Model for Climate Indicators <b>Mr. Zhen Bei</b> , Tsung-Ming Lo, Hong-Tao Zhang, Yun-Bing He, Yi-Zhi Liu, Wan-Ying Zhang, Qiong-Dan Liang and Chun-Wei Zheng Dongguan University of Technology, China
<b>T0393</b> <b>16:35-16:50</b>	Optimizing Thermal Comfort Prediction Models through Efficient Feature Selection: A Comparative Study Hui-Hui Tan, <b>Associate Prof. Tan Yi Fei</b> , Wooi Haw Tan and Chee-Pun Ooi Multimedia University, Malaysia
<b>T0035</b> <b>16:50-17:05</b>	Catenary Locator Detection Based On YOLO And LSD Algorithm <b>Mrs. Yujia Tian</b> , Donglin Wang and Nannan Liu Zhengzhou University of Light Industry, China
<b>T0542</b> <b>17:05-17:20</b>	Data Driven Urban Power Grid Disaster Prediction Under Extreme Weather Conditions <b>Mr. Yixiang Lin</b> , Chuan He, Lixue Zheng and Yitong Ning Sichuan University, China
<b>T0699</b> <b>17:20-17:35</b>	Contrastive Representation Learning for Radar Signals Intra-Pulse Modulation Classification Using Data Augmentation <b>Dr. Hancong Feng</b> , Haixin Yan, Kaili Jiang, Yuxin Zhao, Bin Tang and Khalafalla Mohammed UESTC, China



# Special Session 6-Resource Allocation Schemes for Mono-static/Multi-static Radar Systems

## 单基地/多基地雷达系统的资源分配方案

Chair: Chenguang Shi, Nanjing University of Aeronautics and Astronautics, China  
Yong Luo, Shanghai University, China

May 19th, 2024 | 16:00-17:55

5F-Hall 8 | 5楼8号厅

<b>Invited Speech</b> 28-T0842 16:00-16:20	Antenna Characters with Different Communication and Sensing Scenarios <b>Dr. Yong Luo</b> Shanghai University, China
<b>Invited Speech</b> 29 16:20-16:40	Atomic Array Antenna and Its Applications <b>Dr. Meng Shi</b> Chinese Academy of Sciences, China
<b>T0757</b> 16:40-16:55	Radiation Pattern Analysis of The Pentagon Array <b>Dr. Mohammed Khalafalla</b> , Kaili Jiang, Kailun Tian, Hancong Feng, Ying Xiong and Bin Tang University of Electronic Science and Technology of China, China
<b>T0269</b> 16:55-17:10	Stealthy Trajectories Planning Algorithm for UAV Cluster in Multivariate Threat Environment <b>Mr. Wen Wen</b> , Chenguang Shi and Jianjiang Zhou Nanjing University of Aeronautics and Astronautics, China
<b>T0400</b> 17:10-17:25	High Radiation Efficiency Dual-Polarized Ultra Wideband Tightly Coupled Dipole Array Antenna <b>Mr. Zhenyu Li</b> , Kunming Liu, Feng Yang and Shiwen Yang University of Electronic Science and Technology of China, China
<b>T0619</b> 17:25-17:40	Design of C-band Beam-deflecting Series-fed Microstrip Antenna Array <b>Mr. Peiyang Lv</b> , Tao Jiang, Zili Jiang and Feng Yan Northwest Institute of Nuclear Technology, China
<b>T0262</b> 17:40-17:55	Error Analysis of Radar Position Based on UAV Cluster Deception against Networked Radar <b>Mr. Jiang Zeyu</b> , Shi Chenguang, Zhou Jianjiang and Wen Wen Nanjing University of Aeronautics and Astronautics, China

# Poster 1-电子材料和设备

## Electronics Materials and Devices

Chair: Wei Li, Sichuan University, China

May 18th, 2024   17:00-18:00		3F-Corridor   三楼走廊
<b>T0355</b> <b>Board-1</b>	The Fabrication of Homo-Epitaxial Magnesium Oxide Films in Buffer Layers for Coated Conductors <b>Dr. Yan Xue</b> , Fei Yu, Qiming Zeng, Xiaoting Wang, Xiaodan Chen, Qinjin Huang, Quan Wen and Xin Hou Tianjin University, China	
<b>T0563</b> <b>Board-2</b>	An all-E-mode GaN HEMT Transient-Enhanced LDO without off-chip capacitance <b>Mr. Gang Li</b> , V.L. Mo and Qiang Chen Hefei University of Technology, China	
<b>T0353</b> <b>Board-3</b>	The design of Transparent Capacitance in Pixels for Displays <b>Dr. Yan Xue</b> , Fei Yu, Zhibin Han and Xin Hou Tianjin University, China	
<b>T0225</b> <b>Board-4</b>	Attempted Construction of a Unified Theory of Semiconductor Device Junction Structures <b>Mr. Haoyang Ping</b> , Junqi Xu and Yuhang Liu Soochow University, China	
<b>T0260</b> <b>Board-5</b>	Self-adhesive and Ultra Elastic Dual-mode Flexible Sensors from Conductive Hydrogels <b>Mr. Yunhai You</b> , Xiuru Xu, Zejun Shen and Zhengchun Peng Shenzhen University, China	
<b>T0210</b> <b>Board-6</b>	Sodium Storage Performance and Mechanism Study of TiO <sub>2</sub> Anode in Ether-Based Electrolyte <b>Mr. Yuwen Xu</b> , Liangjun Liu, Xiang Xie, Minghua Jiang Dongguan U-Bond Material Technology INC., China	
<b>T0403</b> <b>Board-7</b>	A Highly Linear AlGaIn/GaN RF HEMT Based on Threshold Compensation Technique <b>Mr. Hao Gu</b> , Zhou Jun and Chen Qiang Hefei University of Technology, China	
<b>T0505</b> <b>Board-8</b>	Microwave Dielectric Properties Calculation of Si <sub>2</sub> N <sub>2</sub> O/BN Composites Based on Mixture Equations <b>Ms. Xinyu Du</b> , Lin Shi, Xinyue He and Ting Zhang Chengdu Medical College, China	
<b>T0406</b> <b>Board-9</b>	Design of a 200V All-GaN Power Half Bridge Gate Drive Integrated Circuit for GaN HEMTs <b>Mr. Jun Zhou</b> , Gu Hao and Chen Qiang Hefei University of Technology, China	
<b>T0236</b> <b>Board-10</b>	Design of Cavity Permittivity Measurement System Based on Python-CST Co-Simulation <b>Dr. Hai Zhang</b> , Wenshen Zhong, Yao Chengjie, Anjun Wang, Junchen Wei and	



	Yipeng Wu Nanchang Institute of Technology, China
<b>T0640</b> <b>Board-11</b>	Numerical Simulation of interaction Between Microwave and Plasma Flow Field <b>Mr. Zhaoyu Wu</b> , Feng Yan, Tao Jiang, Meng Yang and Mingcai Wang Northwest Institute of Nuclear Technology, China
<b>T0646</b> <b>Board-12</b>	A Low-Profile Double-Conical-Beams Antenna Achieved by Mixing the Multi-ring Antenna and the OAM Antenna with Series-Feed Networks Xinxia Song and <b>Dr. Dongjie Qin</b> Xi'an Institute of Electromechanical Information Technology, China
<b>T0496</b> <b>Board-13</b>	Motion Modeling and State Estimation in Elliptical Trajectory Constraint <b>Mr. Shiming Huang</b> , Gui Li, Liangliang Wang and Changlin Hu Nanjing Research Institute of Electronics Technology, China
<b>T0369</b> <b>Board-14</b>	Design of an Ultra-wideband Compound Planar Spiral Antenna for Burst Microwave Signal Detection <b>Ms. Xin Cheng</b> , Min Liu, Qinghe Zhuang and Feng Yan Northwest Institute of Nuclear Technology, China
<b>T0519</b> <b>Board-15</b>	Design and Translation Layout of Adaptive Antenna Array <b>Associate Prof. Qiong Chen</b> and Siyuan Ma Wuhan Second Ship Design and Research Institute, China
<b>T0493</b> <b>Board-16</b>	Compact Circularly Polarized Cross Dipole Antenna Using Single Integrated Feed Port for L-band Satellite Communication <b>Mr. Huan He</b> , Jian Wen, Jie Li, Siyuan Gao, Yali Yao and Yuhong Liang Southwest China Research Institute of Electronic, China
<b>T0050</b> <b>Board-17</b>	Adaptive Super-Twisting Sliding Mode Control of SAPMSM Chao Zhang, <b>Mr. Zhaojin Cao</b> and Xiaoli Song Nanjing Institute of Astronomical Optics & Technology (NIAOT), China
<b>T0333</b> <b>Board-18</b>	Research on Performance Optimization of RIS and Relay Assisted PS-SWIPT Systems under Graph Neural Networks <b>Ms. Yingxue Zhao</b> , Fei Lin, Junrui Zhang and Kaixu Liu Qilu University of Technology (Shandong Academy of Sciences), China
<b>T0633</b> <b>Board-19</b>	End-to-End Lower Limb Motion Recognition with Modal-Channel Attention and Dual-Branch Adaptive Fusion Network via sEMG and Kinematic Data <b>Dr. Changhe Zhang</b> , Zidong Yu, Xiaoyun Wang and Chao Deng Huazhong University of Science and Technology, China
<b>T0549</b> <b>Board-20</b>	Integration and Engineering Application of Digital Twin Model System for Valve Side Bushing of Ultra-High Voltage Converter Transformer <b>Mr. Yongsheng He</b> China State Grid Chongqing Electric Power Company Chongqing Electric Power Research Institute, China
<b>T0785</b> <b>Board-21</b>	Improved Pre-copy Container Live Migration Optimization <b>Mr. Liangbin Zhang</b> , Hongnan du, Yuanming Wang and Xinwei Liu Zhejiang Wanli University, China



<b>T0450</b> <b>Board-22</b>	Simulation and Implementation of New Energy Grid-Connected Power Line Communication System Based on FPGA Yangyang Zhu, Fei Zhong, Zhihong Jiang, <b>Mr. Jiaqi Gao</b> , Xinyu Yang and Shaoxiong Liu Changchun Institute of Technology, China
<b>T0281</b> <b>Board-23</b>	Calculation of E-field Distribution and Research on Voltage Equalization Characteristics in SF6 Insulated Valve Halls of Ultra-high Voltage Converter Stations <b>Dr. Shiling Zhang</b> China Electric Power Research Institute of State Grid Chongqing Electric Power Company, China
<b>T0745</b> <b>Board-24</b>	Simulation and Prototype Verification of An Modular Cascaded Battery System Based Power Quality Enhancement Device Qi Guo, Jingyue Zhang, Libin Huang, Liang Tu, Yufeng Hu, Yanjun Zhao, <b>Mr. Chuang Guo</b> and Junjie Lei China Southern Power Grid/Dawning Network Technology Co.,Ltd
<b>T0760</b> <b>Board-25</b>	Simulation Analysis of Temperature Field and SO <sub>2</sub> F <sub>2</sub> and SOF <sub>2</sub> Gas Composition Detection Under Flow State of Tension Wire Clamp in HVDC Valve Hall <b>Dr. Shiling Zhang</b> China Electric Power Research Institute of State Grid Chongqing Electric Power Company Chongqing, China
<b>T0749</b> <b>Board-26</b>	Mechanism Analysis and Simulation Verification of Trainset Energy Exchange for MMC based DC Grid Qi Guo, Tianyu Guo, Hui Luo, Liang Tu, Yanjun Zhao, Yufeng Hu, Zhilong Guo and <b>Mr. Dehuai Xu</b> China Southern Power Grid/Dawning Network Technology Co.,Ltd
<b>T0740</b> <b>Board-27</b>	Development of New Energy Power Station Operation and Maintenance System <b>Associate Prof. Lu Wang</b> , Hui Wang, Bin Li and Yinqiu Fan Nari Group, China
<b>T0476</b> <b>Board-28</b>	An Improved SAC algorithm Based Optimal Configuration of Energy Storage <b>Mr. Hongyuan Chen</b> , Ninghui Du, Zhihao Hu and Chunshui Du Shandong University, China
<b>T0763</b> <b>Board-29</b>	Theoretical Determination on Deep-Space Earth Station Receiver Near-field Coordination Area with Railway and Automobile Transit Systems in S-band <b>Associate Prof. Nan Wang</b> Beijing Institute of Tracking and Telecommunications Technology, China
<b>T0371</b> <b>Board-30</b>	TrojanFormer: Resource-Efficient Hardware Trojan Detection Using Graph Transformer Network <b>Mr. Menghui Chen</b> , Xiaoyong Kou and Gongxuan Zhang Nanjing University of Science and Technology, China



## Poster Session 2-电子系统与电气工程

### Electronic Systems and Electrical Engineering

Chair: Zhuanlin Liu, Southwest Petroleum University, China

May 19th, 2024   11:00-12:00		3F-Corridor   三楼走廊
<b>T0296</b> <b>Board-1</b>	Simulation and Evaluation of HVIGBT Type 1 Short Circuit Behavior Based on Hefner Model <b>Mr. Jिंगgang Cui</b> , Feng Gaohui and Jiangtao Cheng China CCTEG Taiyuan Research Institute Co., Ltd., China	
<b>T0168</b> <b>Board-2</b>	A Multi-Target Value Sequencing Method for Underwater Mobile Observation Platforms Based on Motion Features <b>Dr. Yi Zheng</b> , Xiangfeng Yang, Lei Shi and Yunchuan Yang Science and Technology on Underwater Information and Control Laboratory, China	
<b>T0314</b> <b>Board-3</b>	Study on Simulation Model And Reliabilities of Microwave SiC Capacitors <b>Dr. Guojian Shao</b> , Jun Sun, Guixia Qin, Yong Yu, Bingxin Ji, Tao Chen and Shutong Zhou Nanjing Institute of Electronic Devices, China	
<b>T0599</b> <b>Board-4</b>	Performance Analysis of Digital IC Units Based on E-mode GaN HEMTs <b>Mr. Ning Chun</b> , V.L Mo and Chen Qiang Hefei University of Technology, China	
<b>T0650</b> <b>Board-5</b>	Investigation of NBTI on NSFET Considering Self-Heating Effect <b>Mr. Haokun Li</b> , Zhuang Miao, Huiyang He, Xiaofeng Bai, Hualian Tang and Cong Li Xidian University, China	
<b>T0362</b> <b>Board-6</b>	Study on the Denoising Method of Train On-Board Relay Coil Current Based on $3\sigma$ -EEMD Haoyuan He, Junhai Liang, Hongpeng Jiang, Yuxi Wang, Tian Ge, Wei Li and <b>Mr. Lin Wu</b> Southwest Jaotong University, China	
<b>T0241</b> <b>Board-7</b>	A Stretchable Electroluminescent Skin based on Microcracked Electrodes for Wearable Sensors <b>Mr. Zifeng Cen</b> , Xiuru Xu, Keyan Chen and Zhengchun Peng Shenzhen University, China	
<b>T0171</b> <b>Board-8</b>	In-circuit Irradiation Effect Test of electronic Components Using Transient High Dose Rate X-ray source at High Power Laser Facility <b>Associate Prof. Yi Tao</b> , Liu Pinyang and Yang Dong Laser Fusion Research Center of the Chinese Academy of Sciences, China	
<b>T0057</b> <b>Board-9</b>	A Dual Half-Bridge Phase-Shifted Converter with Wide ZVS Switching Range <b>Mr. Kaiqiang An</b> , Yalong Fei, Shanbin Wang and Fangzhou Luo 709th Research Institute of China State Shipbuilding Corporation, China	
<b>T0070</b> <b>Board-10</b>	Simulation Research of Three-Phase Vienna Rectifier Based on PI sliding Mode Hybrid control <b>Mr. Shanbin Wang</b> , Luo Fangzhou, An Kaiqiang and Fei Yalong	

The 709 Research Institute of CSSC, China

<b>T0179</b> <b>Board-11</b>	A Low-Cost 4 Ps Root-Mean-Square Resolution Time-To-Digital Converter implemented in A 28 Nm Field-Programmable Gate Array <b>Dr. Jinxin Liu</b> , Peipei Deng, Juan Liu and Ying Wang China Academy of Engineering Physics, China
<b>T0323</b> <b>Board-12</b>	Cable Crosstalk Prediction Model Based on FFR-SVR Han Guopeng, Wang Xinhua and <b>Mr. Ma Jie</b> Southwest Jiaotong University, China
<b>T0528</b> <b>Board-13</b>	Research on Repeated Control Integral Anti-saturation Strategy Based on Model Recovery in Three-phase Inverter <b>Mr. Fei Ya Long</b> , An Kaiqiang, Luo Fangzhou and Wang Shanbin 709th Research Institute of China State Shipbuilding Corporation, China
<b>T0432</b> <b>Board-14</b>	A Low-Frequency and Low-Voltage Disconnection Protection Scheme For Distributed Power Grid with Small-Sized Hydropower Plant <b>Mr. Yuchen Zhu</b> , Quan'E Zhang, Jiesheng Fan, Tongtong Liu and Dong Min State Grid Gansu Provincial Electric Power Company Longnan Power Supply Company, China
<b>T0667</b> <b>Board-15</b>	Metamodel of Magnet-rail Relationship of EMS Maglev Train Based on BP Neural Network Shuo Zeng, Yaozong Liu and <b>Mr. Saibin Xu</b> National University of Defense Technology, China
<b>T0644</b> <b>Board-16</b>	A Dynamic Heterogeneous Redundant Safety Architecture with Peripherals <b>Mr. Zengzhen Sun</b> , Yu Li, Yuanhang Sun, Zhaozhao Li, Xiaobo Ni and Taikun Liu Purple Mountain Laboratories, China
<b>T0653</b> <b>Board-17</b>	Research on Distributed System Fault Diagnosis Based on Logistic Regression <b>Mr. Fang Ke Yan</b> , Shuangbing Wen, Chengwei Liao, Jun Li and Tao Hu Hubei Minzu University, China
<b>T0675</b> <b>Board-18</b>	Rapid Non-destructive Testing of Wheat Moisture Content Based on Dielectric Characteristics and Machine Learning <b>Dr. Songhua Lu</b> Shandong Academy of Agricultural Sciences, China
<b>T0730</b> <b>Board-19</b>	Research on Modeling And Methodology of Transcranial Electric Stimulation System Based on Finite Element Analysis <b>Associate Prof. Xueping Li</b> , Ruohan Sun, Xue Li and Yuan Yang Xi'an University of Technology, China
<b>T0595</b> <b>Board-20</b>	Intelligent Push Method of Risk Data of Smart Power Plant Based on Natural Language Processing <b>Ms. Xiaoxue Li</b> Beijing Aerospace Data Stock Company, China
<b>T0423</b> <b>Board-21</b>	Optimization Model for Expressway Energy Supply Considered Microgrid Source Uncertainty Jinrui Xie, Zhixiang Lin, <b>Mr. Jiuding Tan</b> , Yuchen Zhu, Shuaibing Li and Yongqiang Kang Lanzhou Jiaotong University, China



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<b>T0428</b> <b>Board-22</b>	Optimization Scheduling for Cascaded Hydropower Groups Adapted to Tiered Carbon Trading <b>Mr. Yuchen Zhu</b> , Zhengqiang Wu, Jiesheng Fan, Quan'E Zhang, Huan Han, Juwen Song and Zhongxia Jin State Grid Gansu Provincial Electric Power Company Longnan Power Supply Company, China
<b>T0426</b> <b>Board-23</b>	EV Charging Load Prediction Method for Highway Service Areas Based on Road Network Structure Xianwen Zhang, Zhixu Zhao, Meng Chen, <b>Mr. Jiuding Tan</b> , Shuaibing Li and Yuchen Zhu Lanzhou Jiaotong University, China
<b>T0430</b> <b>Board-24</b>	Calculation of Carbon Emission of Power System Based on Hydroelectric Peak Shaving Scenario <b>Mr. Yuchen Zhu</b> , Jiesheng Fan, Quan'E Zhang, Pan Jiang, Lifeng Xiong, Min Xiang and Tongtong Liu State Grid Gansu Provincial Electric Power Company Longnan Power Supply Company, China
<b>T0399</b> <b>Board-25</b>	A Topology-Enhanced Graph Convolutional Network for Urban Traffic Prediction <b>Dr. Muyang He</b> , Xuan Li, Yu Yao and Tianqing Zhou East China Jiao Tong University, China
<b>T0766</b> <b>Board-26</b>	Effective Region Detection and Distortion Parameters Estimation for Fisheye Images based on Deep Neural Networks <b>Gaohang Liu</b> , Jihao Cao Cao, Xiaoqing Yin Yin and Jinsheng Deng Deng National University of Defense Technology, China
<b>T0635</b> <b>Board-27</b>	Blynk-Enabled IoT Control of Sustainable Biomedical Active Implants Chiang Liang Kok, Chee Kit Ho, Teck Kheng Lee, Yit Yan Koh, Yong Wang, <b>Shu Ma</b> and Jian Ping Chai University of Newcastle Australia, Singapore
<b>T0840</b> <b>Board-28</b>	Optimization of AlGaIn-Based Deep Ultraviolet Light Emitting Diodes with Concave-Shaped Electron Blocking Layer <b>Aoxiang Zhang</b> , Jiayi Yao, Fang Wang, Juin J. Liu and Yuhuai Liu Zhengzhou University, China

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## Poster Session 3-通信系统与信号处理

### Communication Systems and Signal Processing

Chair: Zhiqiang Fan, University of Electronic Science and Technology of China

May 19th, 2024 | 16:00-17:00

3F-Corridor | 三楼走廊

<b>T0700</b> <b>Board-1</b>	Research on UAV based Millimeter Wave Radar Moving Target Detection Technology Using Velocity and Density Joint Clustering Kefei Liao, <b>Mr. Xiantuo Wang</b> , Hanbo Chen, Qinlin Li and Liang Xue Guilin University of Electronic Technology, China
<b>T0358</b> <b>Board-2</b>	Frequency and Spatial Adversarial Attack to SAR Target Recognition <b>Mr. Xichen Huang</b> , Zhengzhi Lu and Bo Peng National University of Defense Technology, China
<b>T0720</b> <b>Board-3</b>	Small Low-power UAV-borne SAR Imaging System Based on Millimeter-wave Radar and RTK Kefei Liao, <b>Mr. Liang Xue</b> , Qinlin Li, Ningbo Xie and Hanbo Chen Guilin University of Electronic Technology, China
<b>T0695</b> <b>Board-4</b>	Design of L-band Multi-beam Phased Array Antenna for Satellite Communications <b>Associate Prof. Yuhong Liang</b> , Yun Zhang and Lingyun He Southwest China Institute of Electronics Technology, China
<b>T0437</b> <b>Board-5</b>	Collective Four-Group Antagonistic Formation Motion With Time-delay <b>Dr. Lin Hu</b> Chengdu University, China
<b>T0031</b> <b>Board-6</b>	A Target Trajectory Measurement Method For Multi-channel array radar <b>Mr. Wang Ke</b> , Hu Xie and Zepeng Yang Xi'an Institute of Space Radio Technology, China
<b>T0129</b> <b>Board-7</b>	Motion Compensation Based on Motion Parameters for Shipborne HFSWR Under Varying Velocity Forward Motion Plus 6-DOF Oscillating Motion <b>Dr. Liang Guo</b> , Lin Wang, Pengfei Kou and Chuanrui Zhou Nanjing Institute of Electronic Technology, China
<b>T0396</b> <b>Board-8</b>	Delay Acquisition of Loran-C Signal Based on Spectral Decomposition <b>Mr. ZiXiong Ye</b> , Zhe Xing, Mingwei Lei and Meng Shi University of Chinese Academy of Sciences, China
<b>T0480</b> <b>Board-9</b>	Joint Range-Angle Estimation Method for FDA-MIMO Radar Based on Graph Signal Processing Kefei Liao, <b>Mr. Haijun Wang</b> , Ningbo Xie, Qinlin Li and Hanbo Chen Guilin University of Electronic Technology, China
<b>T0637</b> <b>Board-10</b>	A Cooperative Localization Method using AOA Measurements based on Deep Neural Network Kuoye Han, <b>Associate Prof. Wupeng Xie</b> , Ruilin Pei, Tianlin Xu and Zhuang Li Information Science Academy, China Electronics Technology Group Corporation, China



<b>T0558</b> <b>Board-11</b>	Echo Separation Method for Moving Ship Targets Based on Inverse Chirp Scaling Algorithm <b>Mr. Aohua Wang</b> , Guanghu Jin, Anxi Yu and Zhihua He National University of Defense Technology, China
<b>T0540</b> <b>Board-12</b>	Reliability-aware Segmented Redundant Routing and Scheduling Mechanism in Time-Sensitive Networking <b>Mr. Xin Wen</b> , Yiqin Lu, Zhuoxing Chen, Meng Wang and Jiancheng Qin South China University of Technology, China
<b>T0545</b> <b>Board-13</b>	Comparison of Capacity Between Two Beam Coverage Modes in Satellite MIMO Downlink with LOS Channels <b>Dr. Cong Li</b> , Hongpeng Zhu, Jian Cheng, Dongming Bian and Guangxia Li Army Engineering University of PLA, China
<b>T0590</b> <b>Board-14</b>	Classification Prediction Model of Anti-interference Performance of UAV Data Link Based on Sequential Number Theory Optimization Improved Support Vector Machine Shuo Zeng, <b>Mr. Jingcheng Du</b> and Guang He National University of Defense Technology, China
<b>T0018</b> <b>Board-15</b>	Analysis of the Integration Logistics Support of Scientific Research Vessel Da Yang Hao <b>Assistant Prof. Xiaobai Liu</b> , Bo Wang and Xingxing Zhang China Ship Development and Design Center, China
<b>T0387</b> <b>Board-16</b>	Design of Multi-Channel Online Monitoring System for Conductive Interference in High-Speed Trains Yongkang Li and <b>Mr. ZhiZhuo Huang</b> Southwest Jiaotong University, China
<b>T0111</b> <b>Board-17</b>	In-Flight Entertainment & Communications Based on Direct-Driven Variable-Inclination Continuous Transverse Stub Antenna Technology Changning Wei, <b>Mr. Liang Chu</b> , Xinlu Yu, Wei Lv, Yunchong Fu and Dongjun Zhang Shenzhen Polytechnic University, China
<b>T0039</b> <b>Board-18</b>	Direct Wave Leakage Cancellation Method of Continuous Wave Radar Based on Surface Target <b>Mr. Wang Ke</b> , Hu Xie and Zepeng Yang Xi'an Institute of Space Radio Technology, China
<b>T0489</b> <b>Board-19</b>	Design of Debris Flow Infrasound Monitoring System Based on Time-Frequency Analysis <b>Associate Prof. Kai Yang</b> , Wei Guo, Hanchuan Dong, Chenhui Wang, Qingjia Meng and Yue Wu Center for Hydrogeology and Environmental Geology Survey, China
<b>T0455</b> <b>Board-20</b>	Research on Behavior Extraction Algorithm Based on RoBERTa-BiLSTM-GCN <b>Dr. Jian Li</b> , Yi-Ru Liu, Wen-Bo Xu, Xiao-Long Tang, Kai-Shi Wang, Ke Yang University of Electronic Science and Technology of China, China
<b>T0244</b> <b>Board-21</b>	Application of Weak reflection Grating Array Geological Disaster Monitoring System Based on IOT <b>Associate Prof. Xiaofei Zhang</b> , Zhonghu Lv, Qinjia Meng and Chenhui Wang

	Center for Hydrogeology and Environmental Geology Survey, CGS, China
<b>T0157</b> <b>Board-22</b>	Kitchen Food Waste Image Segmentation and Classification for Compost Nutrients Estimation <b>Dr. Guanghui Wang</b> Toronto Metropolitan University, Canada
<b>T0316</b> <b>Board-23</b>	Design of A Micro-Power Landslide Crack Data Acquisition System Based on the Internet of Things <b>Associate Prof. Wei Guo</b> and Qingjia Meng Center for Hydrogeology and Environmental Geology Survey, CGS, China
<b>T0473</b> <b>Board-24</b>	7-DoF Grasping Pose Estimation Based on Advanced Feature Aggregation Mechanism <b>Ms. Huiping Duanmu</b> , Kang An, Hui Zhang and Xiangpeng Liu Shanghai Normal University, China
<b>T0708</b> <b>Board-25</b>	An Improved Method for Parameter Identification of J-A Models Xulai Zhu, <b>Mr. Shuai Shen</b> , Gongquan Zhang and <b>Mr. Zongyao Wang</b> Anhui Jianzhu University, China
<b>T0715</b> <b>Board-26</b>	Dubins-A*: A New Global Path Planning Scheme for Fixed-Wing UAV with Irregular Obstacles Avoidance <b>Mr. Junyi Xu</b> , Mengji Shi, Fan Tang, Xinyu Sun, Jiangfeng Yue, Boxian Lin and Kaiyu Qin University of Electronic Science and Technology of China, China
<b>T0726</b> <b>Board-27</b>	Multi-Agent Deep Reinforcement Learning based Path Planning Algorithm for Multiple Automated Guided Vehicles in Large-scale Outdoor Scenarios <b>Mr. Tengda Wang</b> , Wenjun Wu, Yang Sun and Teng Sun Beijing University of Technology, China
<b>T0803</b> <b>Board-28</b>	A Millimeter-Wave Radar Based Fall Detection System Utilizing Time-Series Characteristics <b>Zhiqiang Fang</b> , Jiangang Liu, Xijuan Zhang, Yulong Mei, Lihui Pu and Yong Jia Chengdu University of Technology, China



# Special Session 2-Semiconductor Devices, Integrated Circuits and Applications

## 半导体器件、集成电路和应用

Chair: Caoyu Li, Yangtze Delta Region Institute of University  
of Electronic Science and Technology of China, Huzhou

May 20th, 2024 | 9:30-11:20

Zoom Room 1: 812 1327 8732

<b>Invited Speech</b> <b>30</b> <b>9:30-9:50</b>	Design of Absorptive Common-Mode Noise Suppression Filter <b>Dr. Wen-Sheng Zhao</b> Hangzhou Dianzi University, China
<b>T0326</b> <b>9:50-10:05</b>	17-inch Ink-jet Printing Flexible OLED Display with Narrow Bezel <b>Dr. Fan Chen</b> , Guangyao Li, Longqiang Shi, Baixiang Han, Weiran Cao and Shengdong Zhang Peking University Shenzhen Graduate School/TCL China Star Optoelectronics Technology Co., Ltd Shenzhen, China
<b>T0257</b> <b>10:05-10:20</b>	Controllable Deposition of Polyimide Insulation Layer by an Engineered Stepped Pre-curing Method in Double-sided TSV Processes <b>Dr. Baoyan Yang</b> , Yingtao Ding, Yigang Hao, Han Wang, Ziyue Zhang and Zhiming Chen Beijing Institute of Technology, China
<b>T0390</b> <b>10:20-10:35</b>	A 98.5 dB-SNR 0.14 mm <sup>2</sup> Chopped Delta-Sigma Modulator with 1.2 $\mu$ V Offset for Current Sensing Applications <b>Mr. Tianqiang Lin</b> and Xiaochao Li Xiamen University, China
<b>T0523</b> <b>10:35-10:50</b>	Multiple Dielectric Isolation Layer to Improve Programming Interference in 3D Charge-Trapping NAND Flash Memory <b>Ms. Xue Lv</b> , Da Chen, Fei Wang and Zheng Fang Shandong University of Science and Technology, China
<b>T0434</b> <b>10:50-11:05</b>	A Multi-channel Data Processing SoC Verification Platform <b>Ms. Mo Chen</b> , Zijun Wang, Yongchang Shi, Lei Wang and Yiwei Zhao Space Star Technology Co. Ltd, China
<b>T0465</b> <b>11:05-11:20</b>	A Three-Dimensional Simulation Study of Dielectric Modulated TreeFET as a Label-Free Sensor <b>Ms. Shujun Gao</b> , Miao Zhuang, Huiyang He, Hualian Tang, Cong Li and Xiaofeng Bai Xidian University, China



## Session 2B-Electronics Materials and Devices

### 电子材料和设备

Chair: Jiandong Cui, GRIMAT Engineering Institute Co., Ltd, China

May 20th, 2024 | 9:30-11:05

Zoom Room 2: 883 0381 6096

<b>Invited Speech</b> <b>31</b> <b>9:30-9:50</b>	Transferable Inorganic Semiconductor Nanomembranes for Flexible/Transient Sensors <b>Dr. Qinglei Guo</b> Shandong University, China
<b>T0692</b> <b>9:50-10:05</b>	Establishment of Rate-Dependent Hysteresis Model And Control Method Of Piezoelectric Ceramic Actuator <b>Ms. Lili Qu</b> , Yanyan Wang, Yuanting Huang, University of Technology and Education, China
<b>T0216</b> <b>10:05-10:20</b>	Ultra-low Loss Current Enhancement SiC Planar Gate IGBT with Composite Barrier Structure <b>Mr. Jie Wang</b> and Jinping Zhang UESTC, China
<b>T0512</b> <b>10:20-10:35</b>	4H-SiC Light Triggered Thyristor with Hole-Injection Enhanced n Short Base for Low Power Dissipation <b>Mr. Xuan Ji</b> , Xi Wang and Rui Hou Xi'an University of Technology, China
<b>T0230</b> <b>10:35-10:50</b>	Preparation of nanotube Co <sub>3</sub> O <sub>4</sub> and Its Application in Tracking of Ethanol Molecules <b>Prof. Jiandong Cui</b> , Xiao Zhang, Hongbin Zhao and Yaohua Xu GRIMAT Engineering Institute Co., Ltd, China
<b>T0579</b> <b>10:50-11:05</b>	Comparison study of PHM Driving Pixel Circuits in Mini- And Micro- LED displays <b>Dr. Lamei Luo</b> , Jhongciao Ke and Daobing Hu Peking University, China



## Session 4B-Signal Processing

### 信号处理

Chair: Wei Pu, University of Electronic Science and Technology of China, China

May 20th, 2024 | 9:30-11:30

Zoom Room 3: 854 4775 3573

<b>T0094</b> 9:30-9:45	A Microstrip Antenna with EBG Reflector Design for WBAN Communications <b>Mrs. Zhou Yanqiu</b> , Chang Ruihua and Shi Ting Engineering College of the CAPF, China
<b>T0082</b> 9:45-10:00	Multiframe Track-Before-Detect For Weak Target With Doppler Ambiguity <b>Dr. Liangliang Wang</b> , Gui Li, Cai Ren, Pengyu Ma, Cheng Wu and Guangxin Wu Nanjing Research Institute of Electronics Technology, China
<b>T0109</b> 10:00-10:15	Enhancing Ambient Backscatter Communication in Smart Grid Substation through Intelligent Multi-Agent Backscattering Alogrithm Libo Fan, Di Zhai, Rongjie Han, Jiabin Huang and <b>Dr. Ke Li</b> State Grid Smart Grid Research Institute Co., LTD, China
<b>T0107</b> 10:15-10:30	Sliding Velocity Filtering Track-Before-Detect Method With Extended Kalman Filter <b>Dr. Liangliang Wang</b> , Gui Li, Cai Ren, Pengyu Ma, Cheng Wu and Guangxin Wu Nanjing Research Institute of Electronics Technology, China
<b>T0458</b> 10:30-10:45	An LMS-Mallat Denoising Method Based on New Energy Grid-Connected Power Line Communication is Proposed <b>Mr. Jiaqi Gao</b> , Fei Zhong, Zhihong Jiang, Xinyu Yang, Yangyang Zhu and Mingyang Ma Changchun Institute of Technology, China
<b>T0555</b> 10:45-11:00	Advancing Heart Health with Multifaceted Deep Learning for ECG Signal Analysis <b>Dr. Sijjad Ali</b> , Asad Ali, Amir Hamza, Maryam Jamil, Muhammad Uzair, Rana Zaki Abdul Bari, M. Hunza, Nabel Akram, Hamid Sharif Shenzhen University, China
<b>T0460</b> 11:00-11:15	Research on Wavelet Transform of Ultra-High Harmonics in New Energy Grid Connection Xinyu Yang, Fei Zhong, Fanhe Kong, <b>Mr. Jiaqi Gao</b> , Yangyang Zhu and Zhihong Jiang Changchun Institute of Technology, China
<b>T0026</b> 11:15-11:30	DacFER: Dual Attention Correction Learning for Efficient Facial Expression Recognition <b>Dr. Sun Rui</b> , Zhaoli Zhang and Hai Liu CCNU, China

## Session 7A-Electronics Applications

### 电子应用

Chair: Hongyang An, University of Electronic Science and Technology of China, China

May 20th, 2024 | 13:30-14:45

Zoom Room 1: 812 1327 8732

**T0484**

**13:30-13:45**

A Quantitative Evaluation Method for the performance of primary Frequency Regulation Of System Resources

**Dr. Xuelian Wu**, Fusuo Liu, Hui Huang, Hongli Zhang and Wei Li  
NARI Group Corporation/ State grid electric power research institute, China

**T0612**

**13:45-14:00**

Development of Injection Probes for Electrostatic Discharge Immunity Test of Integrated Circuits

**Mr. Jinlong Li**, Zhong Wang and Shanyi Jin  
Shanghai Institute of Measurement and Testing Technology, China

**T0327-A**

**14:00-14:15**

A Low Power Low Error Rate Iterative Approximate Multiplier

**Mr. Chenghao Wan** and Hailong Jiao  
Peking University Shenzhen Graduate School, China

**T0596**

**14:15-14:30**

An Electrostatic Discharge Pulse Protection Device for 100 Mbps Ethernet Port

**Mr. Zhong Wang**, Jinlong Li and Shizhen Zhao  
Shanghai Institute of Measurement and Testing Technology, China

**T0125**

**14:30-14:45**

Design of Low-power EEG Detection System for Emotion Classification

Zhihong Mo, Yanqing Yuan, **Dr. Weiwei Shi**, Jingbin Mai, Dongdong Zeng, Xiacong Liu and Guiping Li  
Shenzhen University, China



## Session 1C-Communication and Networks

### 通信和网络

Chair: Zhuanlin Liu, Southwest Petroleum University, China

May 20th, 2024   13:30-15:30		Zoom Room 2: 883 0381 6096
<b>T0566</b> 13:30-13:45	The Influence of the Medium and Structure for Cooling Suit on the Wireless Signal	<b>Assistant Prof. Zhenpeng An</b> , Di Zhang, Yang Du and Yufeng Fan Shenyang Fire Science and Technology Research Institute of MEM, China
<b>T0203</b> 13:45-14:00	Test Method for Interlaken Interface Based on DRP	<b>Dr. Daming Yang</b> , Yuan Wang, Lei Chen, Wei Zhuang, Guowei Hou, Shiyuan Zhang, Mingzhe Li and Anyu Yang Peking University, China
<b>T0160</b> 14:00-14:15	User Mobility-Based Dynamic Clustering Algorithm for Cell-Free Massive MIMO Systems	<b>Mr. Yi Liu</b> and Bo Li Yunnan University, China
<b>T0410</b> 14:15-14:30	Intelligent Probe System Based on TSN Controller	<b>Ms. Xiaoqun Liu</b> , Yingying Chi, Yong Xie, Xiaolu Zhou, Jiguang Zhang, Rui Wang and Fei Chen Beijing Smart-Chip Microelectronics Technology Co., Ltd, China
<b>T0250</b> 14:30-14:45	Intelligent Reflect Surface Assisted TOPSIS-based Communication Handover Strategy	<b>Ms. Yawen Gao</b> and Bo Li Yunnan University, China
<b>T0220</b> 14:45-15:00	An Simplified Algorithm for PAPR Suppression in HPLC Dual Mode Communication System and Its FPGA Implementation	<b>Mr. Hongjian Gao</b> , Jianding Fu, Jingyu Ren, Yang Lu and Fei Huang State Grid Smart Grid Research Institute Co., Ltd, China
<b>T0445</b> 15:00-15:15	A Two Layer Algorithm enabled Federated Learning Strategy in the IoT Network with MEC	Jing Zou, Peizhe Xin, <b>Mr. Li Zhizhuo</b> , Heli Zhang and Xin Wang Beijing University of Posts and Telecommunications, China
<b>T0091</b> 15:15-15:30	An Intelligent Navigation System for the Visually Impaired Based on Machine Vision	<b>Ms. Zhuyu Li</b> , Bing Xiong, Jialing Huang, Zhuojiang Xie, Tingli Guo and Hao Gu Changsha University of Science and Technology, China

## Session 2C-Electronics Materials and Devices

### 电子材料和设备

Chair: Liao Wugang, Shenzhen University, China

May 20th, 2024 | 13:30-15:15

Zoom Room 3: 854 4775 3573

**T0118**  
**13:30-13:45**

Pharmaceutical Liquid Detection System based on a Perovskite Quantum Dot Infrared Photodetector

**Mr. Chun Lei**, Long Teng, Yuqin Cai, Zhi Tao, Xiang Liu and Wenjian Kuang  
Nanjing University of Information Science & Technology, China

**T0755**  
**13:45-14:00**

A Strategic Study of Electric Vehicle Participation in Charging Based on Dynamic Time-Sharing Tariff Guidance

**Mr. Weixian Li**, Hongbin Sun  
Jilin Institute of Chemical Technology, China

**T0520**  
**14:00-14:15**

Research on Pulse Thermal Resistance Measurement Method of Power Electronic Devices Based on SiC Schottky Barrier Diode

**Dr. Xin He**, Weibang Li, Qingyuan Hua and Zhiyi Dong  
State Grid Electric Power Research Institute, China

**T0575**  
**14:15-14:30**

Improvement of Low Gray-level Expression by Pixel Circuit Design in Micro Light-emitting Diode Displays

**Dr. Xiao-Qi Li**, Dao-Bing Hu and Jhong-Ciao Ke  
Peking University, China

**T0534**  
**14:30-14:45**

Triple-Band Rectangular Cavity Bandpass Filter Based on Multiple Odd Modes

**Ms. Linqi Li**, Hejie Wang, Yujiao Zhang and Wenzheng Sun  
Northeastern University, China

**T0594**  
**14:45-15:00**

Improving the Performance of Solution-Processed OLED by High Triplet Energy Hole transport Layer

**Dr. Dengfeng Mei**, Jun Hu, Ting Shi, Jinchuan Li and Hang Zhou  
Peking University Shenzhen Graduate School, China

**T0737**  
**15:00-15:15**

Frequency Translation and Filtering Techniques in Baseband Conversion

**Mr. Md Alamgir Islam**  
Beijing Institute of Technology, China



# Session 7B-Electronics Applications

## 电子应用

Chair: Wei Li, Sichuan University, China

May 20th, 2024 | 16:00-17:30

Zoom Room 1: 812 1327 8732

**T0780**  
**16:00-16:15**

Adaptive Load Balancing Strategy for VR Microservices with Edge AI  
Liang Liu, Yuxiang Chen, Xun Shao, **Dr. Kailin Wang** and Yu Huang  
Beijing University of Posts and Telecommunications, China

**T0199**  
**16:15-16:30**

The Network Recovery Scheme based on Cooperative Pairing in the IoT Networks for Transformer Substation  
Donglei Zhang, Yang Lu, Jianding Fu and **Mr. Biqiang Lu**  
State Grid Jilin Electric Power Co., Ltd. Information and Communication Company, China

**T0339**  
**16:30-16:45**

Design and Simulation of Multi-Functional Space Electron Beam Welding Equipment  
**Assistant Prof. Wenjun Yan**, Zihan Xu and Yue Yu  
Beijing University of Technology, China

**T0452**  
**16:45-17:00**

Investigations and Characterization of a New FM Active Receiving Antenna for Modern Vehicles Applications  
**Dr. Ahmed F. Ashour**, Mostafa M. Fouda, Andrew Chrysler, Steve C. Chiu and Ashraf Ramadan  
Idaho State University, USA

**T0305**  
**17:00-17:15**

Boot Design and Verification of a Radiation Hardened chip  
**Mrs. Dan Cheng**, Huai Wang, Shaozhen Zhang, Dan Qi and Mo Chen  
Space Star Technology Co. Ltd, China

**T0060**  
**17:15-17:30**

Design of Photoelectric Conversion and Frequency Measurement Circuits for LiDAR Used in Greenhouse Gas Detection  
**Ms. Shiya Shen** and Nan Li  
The 58th Research Institute of China Electronics Technology Group Corporation, China

# Session 3C-Power and Electrical Engineering

## 电力和电气工程

Chair: Peng Chen, Southeast University, China

May 20th, 2024 | 16:00-17:50

Zoom Room 2: 883 0381 6096

<b>Invited Speech</b> <b>32</b> <b>16:00-16:20</b>	Large-Scale Electric Vehicle Access Planning and Scheduling And Market Transaction Optimization <b>Dr. Hui Hou</b> Wuhan University of Technology, China
<b>T0194</b> <b>16:20-16:35</b>	Optimization of Detent Force of Tubular Permanent Magnet Linear Motor Based on Genetic Algorithm Ping Ma, <b>Mr. Heng Ding</b> , Leng Yue and Hao Chen Guangdong University of Technology, China
<b>T0248</b> <b>16:35-16:50</b>	The Application Research of ADRC in Heat Exchange Station Control System <b>Mr. Siyu Tang</b> , Jin Xiong and Zizheng Liu Wuhan University of Technology, China
<b>T0628</b> <b>16:50-17:05</b>	Research Requirements of End-Power Supply Capacity Optimizing Based on Distributed Energy Storage Configuration <b>Mrs. Jiayu Wu</b> , Pengfei Li Hefei University of Technology, China
<b>T0478</b> <b>17:05-17:20</b>	Reliability Calculation of VSC-HVDC Based on Operation Mode and Subsystem Division Zhimin Lu, Rongjun Chen, Li Liu, Wei Ren, Haiyan Zhang and <b>Dr. Kang Li</b> Wuhan University, China
<b>T0309</b> <b>17:20-17:35</b>	Evaluation Methods for the Degree of Interaction and Coupling between New Energy and DC <b>Dr. Xuelian Wu</b> , Fusuo Liu, Zhaowei Li, Hongli Zhang and Yening Lai NARI Group Corporation/ State Grid Electric Power Research Institute, China
<b>T0239</b> <b>17:35-17:50</b>	Intelligent Control of High Voltage Circuit Breaker Based on Active Disturbance Rejection Control <b>Mr. Zizheng Liu</b> , Hejin Xiong, Siyu Tang, Yancheng Zou and Gaofei Hu Wuhan University of Technology, China
<b>T0750</b> <b>17:35-17:50</b>	Coordinated Optimisation of Reactive Load Planning by Distributed Power Sources and Self-saturated Reactors <b>Mr. Mingyu Wang</b> , Jie Wang, Chuxiang Feng, Qidi Wang, Peilin Li and Kai Zhang Northeastern University, China



## Session 6B-AI and Applications

### 人工智能和应用

Chair: Yang Luo, University of Electronic Science and Technology of China, China

May 20th, 2024 | 16:00-18:00

Zoom Room 3: 854 4775 3573

<b>Invited Speech</b> 27 16:00-16:20	An Air Quality Oriented Convolutional and Interaction Network for Traffic Flow Prediction <b>Dr. Xuan Li</b> East China Jiaotong University, China
<b>T0074</b> 16:20-16:35	System Design and Research of Land Air Amphibious Robots <b>Prof. Minghui Zhao</b> China Coal Technology & Engineering Group Shanghai Co., Ltd., China
<b>T0588</b> 16:35-16:50	Design of Sliding Mode Control for Underwater Robot Based on Fixed-Time Disturbance Observer <b>Mr. Zhen Zhou</b> and Cheng Zhu Nanjing University of Posts and Telecommunications, China
<b>T0378</b> 16:50-17:05	Efficiency Improvements in Trusted Service Management System via APDU Command Orchestration Peng Dan, Yi Zuoming and <b>Mr. Liu Liu</b> Development Department China Mobile (Chengdu) Industrial Research Institute, China
<b>T0287</b> 17:05-17:20	Design of Logistics Delivery System Based on Image Recognition <b>Mr. Chenghai Zeng</b> , Li Wang and Yuwen Chen Guangzhou Institute of Science and Technology, China
<b>T0510</b> 17:20-17:35	Research on Blockchain-based Mahogany Identification Methods. <b>Mr. Ren Shuaitao</b> and Hua Zhou Southwest Forestry University, China
<b>T0079</b> 17:35-17:50	Research on Intelligent Control of Jigging System in Coal Preparation Plant <b>Prof. Minghui Zhao</b> China Coal Technology & Engineering Group Shanghai Co., Ltd., China
<b>T0100</b> 17:50-18:05	Transformer-based single view joint prototype features adversarial reconstruction of probabilistic point cloud <b>Ms. Jing Guo</b> , Li Liu, Huaxiang Zhang and Dongmei Liu Shandong Normal University, China
<b>T0526</b> 18:05-18:20	Fusion Application of Intelligent Unmanned Cluster Systems with Large Models <b>Mrs. Han Chen</b> National Defense University, China



# Listeners

## 听众

<b>Lis-1</b>	Fang Bin, Chen Guozhu Ningbo University, China
<b>Lis-2</b>	Zhengke Chen Shanghai Jiao Tong University, China
<b>Lis-3</b>	Bowen He Shanghai Jiao Tong University, China
<b>Lis-4</b>	Yutao Tang Civil Aviation Flight University of China, China
<b>Lis-5</b>	Xiaoli Song Nanjing Institute of Astronomical Optics Technology (NIAOT), China
<b>Lis-6</b>	Yang Cheng Zhongxing Weidianzi, China
<b>Lis-7</b>	Yanyuan Ba Henan Normal University, China
<b>Lis-8</b>	Anxi Yu National University of Defense Technology, China
<b>Lis-9</b>	Wenbiao Gao Yangzhou University, China
<b>Lis-10</b>	Chengning Wang Huazhong University of Science and Technology, China



# Gala Dinner & Awards Ceremony

May 18<sup>th</sup>, 2024 (Saturday) | 5月18日 (星期六)

## Onsite Awards Ceremony 现场颁奖晚宴

18:00-20:00 | 5F- Hall 5 | 5楼5号厅



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# One-Day Visit

May 20, 2024  
2024年5月20日

## Fun in Chengdu in one day: cute panda + thousand-year-old ancient Shu

### 一天玩转成都：萌宠熊猫+千年古蜀！

- ✓ Sanxingdui Museum | 三星堆博物馆
- ✓ Chengdu Research Base of Giant Panda Breeding | 熊猫基地

#### Reference itinerary

07:30 Depart from the hotel and head to Panda Base | 酒店出发，前往成都大熊猫繁育研究基地

08:00 Guided tour of the Panda Base | 导游带领参观熊猫基地

12:30 Have lunch and go to Sanxingdui Museum | 享用午餐，前往三星堆博物馆

14:00 Guided tour of Sanxingdui Museum | 参观三星堆博物馆

17:00 Departure back to Chengdu | 启程返回成都



#### Chengdu Research Base of Giant Panda Breeding

##### 成都大熊猫繁育研究基地

Chengdu Research Base of Giant Panda Breeding is now one of southern China's most popular destinations due to its focus on breeding, conservation, and introducing new pandas into wild populations.

成都大熊猫繁育研究基地拥有全球最大的圈养大熊猫人工繁殖种群，是世界著名的大熊猫迁地保护基地、科研繁育基地、公众教育基地和教育旅游基地。以保护和繁育大熊猫、小熊猫等中国特有濒危野生动物而闻名于世。



#### Sanxingdui Museum

##### 三星堆博物馆

The Sanxingdui site is considered the most significant archaeological discoveries of the 20th century. This bronze-age site contains thousands of rare treasures dating back to 1600-1046 BC.

三星堆是我国西南地区迄今所知规模最大、延续时间最长、出土文物最丰富的先秦时期遗址，遗址内的古城盛极于距今 3000 多年的商代中晚期。凸眼巨耳的青铜纵目面具、近 4 米高的青铜神树、金面具……三星堆以“祭祀坑”出土文物为代表，展现恢宏气势，在中华文明满天星斗中熠熠夺目。

#### Highlights | 活动亮点

[Tour Guide] A professional tour guide will take you around Chengdu in one day. | 专业导游，一天时间带您玩转成都

[PandaBase] Watch the panda babies acting cute and cute, and visit the giant panda delivery room and villa. | 看熊猫宝宝们撒娇卖萌，参观大熊猫的产房和别墅

[Sanxingdui Museum] The largest, longest-lasting, and richest cultural connotation of ancient ruins ever discovered in southwest China. | 迄今在西南地区发现的规模最大、延续时间最长、文化内涵最丰富的古国遗址。

[Urban pick-up and drop-off] Free pick-up and drop-off within the Chengdu urban ring expressway, making traveling more convenient. | 成都市区绕城高速内免费接送，出游更便利。



